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THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher. B. S. HEDRICK, Agricultural Editor.

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Miscellaneous.

From the N. Y. Tribune.

The New Esculent Root—The Chinese or Japan Potato.

SIR: This most important esculent (Dioscorea Batatas, Dioscorea Japanica, or Ignam de la Chine,) was first introduced into Europe in 1850, it having been sent to France by M. de Montigny, French Consul at Shanghae, in Northern China, who transmitted a few roots to some learned men. It did not, however, attract their special attention to its great value and immense importance until the year 1853, when some highly intelligent botanists recognized the great advantage to be derived from its extensive culture, and devoted themselves to its increase and to the development of its merits.

Finding this precious root to be superior in its farinaceous properties to either of the species of the potato, and that it was in no case subject to decay, whether in the ground or out of it, and was of so hardy a character as to withstand the severest Winter uninjured, they have now come to the conclusion, in common with English botanists who have made similar experiments, that the Dioscorea Batatas is destined to supersede the precarious and uncertain culture of the ordinary potato, *so liable to rot and to other disease*, and that the grand desideratum, a substitute in itself more valuable than the ordinary potato, has at length been found. So strongly confirmed is this opinion in Europe, that we find it supported by all their leading agricultural and horticultural publications, and even by *The Mark Lane Express*, the principal representative and expositor of the agriculturists of Great Britain.

Roots of this plant have been produced in Middle and Northern France, weighing 2 to 2 1-2 lb., from tubers planted in April and dug in October.

One great point of superiority possessed by it is that it may remain in the ground two or three years, always enlarging in size, and equally nutritious and excellent in flavor. Experiments have proved that when the roots are left for eighteen months in the ground, the yield is

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more than treble that of roots left but for one Summer; and it is also considered that the roots are improved in quality.

In the Spring of 1853 the largest plantation in France contained but 700 roots. Yet such is the case and rapidity of its propagation and increase that it is already becoming most remarkably disseminated. Its growth is very rapid and it seems suited to any climate and to any soil, although a sandy loam or sandy soil has been deemed preferable in Europe, where the sun-heat is so much less powerful than with us. It has been tested in this country in sandy and in stiff loam and grew vigorously in both, and from analogy it is more than probable that it will do well in humid soils. It may here be deemed worthy of note that in addition to the great similarity in the genera and species natural to China and North America, one of our most common native plants (also a vine) is the *Dioscorea villosa*, found in great plenty in hedge-rows and on the borders of ravines, from Canada to Carolina, and everywhere called "Wild Yam;" and that another species is found growing very abundantly in Virginia and Carolina. It is therefore only placing the Dioscorea Batatas among its relatives and congeners, when we introduce it to the American soil.

One very peculiar characteristic of this plant is, that its roots run *perpendicularly* into the earth, thereby greatly enlarging its capacity to produce the greatest possible crops from a given space of ground. It has been calculated in the French publications, from the experiments there made, that an acre will in six months produce 36,000 pounds, and in eighteen months, 120,000 pounds.

It possesses another great advantage. The roots, when placed in a cellar, remain firm and perfect, as well as free from sprouts, and they can be kept out of the ground a year without injury or deterioration of their alimentary qualities. This property renders them invaluable for use in long sea voyages, and especially as a preventive of scurvy.

We deem this plant much better adapted to cold than to hot climates, as it has been proved that the greatest increase in the size of the roots take place during the coolest period of our season—the Autumnal months. The roots grown here the past Summer, when dug at the end of October, were found to be in a vigorous state of growth.

Notwithstanding the fact that this root, as has been already stated, may be propagated with great rapidity, still the demands from all quarters on the first cultivators have been so rapid and numerous, that it has been found impossible to obtain any considerable supply for the country, and but limited quantities will be attainable the present season. In fact, many years must elapse before even moderate supplies can be furnished to the numerous countries which will strive to establish its culture.

The manner of cultivation is very simple and the same course can be pursued as with the sweet potato. It is said that the Chinese cultivate it in hills, as we do Indian corn, and plant but one tuber or piece of root in each hill and plow between the roots twice during the Summer to keep them free of weeds. We doubt this statement—first, because the Chinese exercise the utmost economy in the use of the soil; and secondly, because the labor of that country is generally manual. If cultivated in hills, we think that three or four pieces should be planted in each; but we would suggest that planting them in double rows, and they will then need to be plowed but one way. We think by adopting this course a greater yield may be obtained from an acre, and at less expense than otherwise. In several of the Western States, where land is cheap and no manure required, and where the soil is so easily tilled it will probably be most advantageous to cultivate them in single rows, as is usually done with the common potato.

Having had opportunities of testing the quality of the Dioscorea the past Autumn grown this country, the following will serve as a brief description:

Root fifteen to twenty-five inches long and two inches in diameter, tapering from the head the outward appearance similar to the white variety of the sweet potato; skin thin, readily peeling off when cooked; flesh snow-white, delicately farinaceous, with a slight almond flavor, exceedingly grateful when used in the same manner as the ordinary potato, and decided both richer in nutrition and superior in quality. It can be cooked by water or steam or roasted, and in appearance and taste is like the finest mealy varieties of the common potato.

It requires but ten minutes boiling, whereas the ordinary potatoes require twenty minutes.

This root possesses another great advantage—it produces a fine, pure, white flour, which will compare advantageously with wheat flour of any country, and is equal, if not superior, in nutriment.

The introduction of this invaluable vegetable is too recent for us to know all its qualities, it having been tested but for four years in Europe and only one year in our own country. It may, however, be fairly assumed that *a vegetable which has for centuries formed the common food of the immense population of China and Japan—adopted as such by nations so regardful of domestic economy, and so careful and economical in their appropriation of the soil—must be possessed of no ordinary merits.* Such we should consider to be the character of this vegetable, combining, as it does, the circumstance of immense product, disminished comparative labor, and an adaptation to soils where scarcely any other root will grow, with the additional fact of its remaining in the ground during the Winter, and for a period of three or more years, furnishing throughout all seasons a fresh, wholesome, and nutritious aliment for all classes at the cheapest rate.

On the whole we may consider ourselves justified in believing and confidently asserting, that the acquisition of the esculent in Europe and America constitutes an era in agriculture equaled only (if equaled indeed it be) by that which was consequent upon the introduction of the Indian maize of our own continent. The fact is certainly most astonishing, that we have remained thus long entirely ignorant of so invaluable a vegetable—one which is destined soon to cover myriads of acres—and which, but for that great malady, the potato-rot, we should probably be will unacquainted with, as it was the prevalence of that malady which induced the Consul of France to send home this root as the most appropriate substitute.

With regard to the period of planting and propagation, the following remarks may be made: As the Dioscorea is perfectly hardy, the tubers, as hereafter described, or small sections or eyes of the root (the same as potato sets), may be planted at the first opening of Spring at a depth of about three inches; but, during the present scarcity of this root, the course has been adopted of planting the sets closely in an ordinary hot-bed frame to start their growth, and afterward planting them in rows in the garden or field. The same culture as pursued everywhere with the common potato will serve successfully for the Chinese one.

The propagation of tubers for the extension of stock is also very simple. Like the sweet potato, the Dioscorea is a trailing vine. In six weeks from the time of planting the pieces of root, they will have formed shoots five or six feet in length. These shoots may be buried for two-thirds their length in straight furrows, one inch deep, allowing the leaves alone to be out of the earth, and the extremity of the shoots entirely so.

Another mode is to take off two-thirds of each shoot and cut it into sections, each having a leaf with a small portion of the stem, and planting these in a bed, covering all but the leaf. In either case they will make roots after the first rain or if watered; and in twenty to thirty days each will form a bulb or tuber. These must be carefully preserved when taken up in the Fall, and will serve for Spring planting the ensuing season, the tubers being as valuable and productive as sections of the roots. Tubers the size of a large pea, planted in the Spring, from beautiful, regular roots, fifteen to twenty inches long, by Autumn, as has been fully proved *here* the past season, in confirmation of the European statements.

For any further information I would refer you to the United States Patent-Office Report just issued; to the *Revue Horticole* and *Bon Jardinier* of France, and to *The Mark Lane Express* of England.

I am, Sir, your obedient servant,
WM. R. PRINCE.

Flushing, L. I., Dec. 26, 1855.

Useful Receipt.—A cement, which gradually becomes as hard as stone, may be made by mixing twenty parts by weight of clean sharp sand, two of litharge, and one of whiting, and making them into thin putty with linseed oil. For seams in roofs, a cement may be formed of white or red lead, thinned with boiled linseed oil, into which some sharp, dry sand is stirred. For the joints of water and gas pipes, white lead cement is the best.

It is estimated that the fences in the United States costs cost $400,000,000.

From Miner's Bee Keeper's Manual.

The Apiary.

The position of the apiary is a matter of importance. In most cases, it is seen to front the south, according to the usual practice of the present day; and especially when enclosed, somewhat on the plan of bee-houses illustrated at page 218. This position is considered necessary by bee-keepers generally, in order to afford the bees all the warmth, both in summer and winter, that it is possible to give, and which I consider so ruinous to their prosperity.

SOUTH-EAST THE BEST POINT TO FRONT.

It will not, in all cases, be found convenient to have the apiary front any point of the compass; in consequence of the situation of the ground where it is to be erected, since it is often necessary to build parallel to some fence already constructed; but the best possible way it can point is *south-east*. Directed to the south or to the east, is not particularly objectionable, when the back of the building has an opening to admit a current of air among the hives, as I have directed; but when it is convenient, I recommend a preference to be given to the aforesaid direction.

MORNING SUN NECESSARY.

Every husbandman knows full well ho much more labor his hired men can perform when they get to work at the rising of the su than when they lie in bed until that luminar peers in at the windows of their bed-rooms an angle of 20 deg. to 30 deg. To the abov may be likened the sallying forth of the hone bee. It is not often that bees sally forth to t fields in the morning, until the rays of the s strike their hives. For example, two hiv may be placed in the months of June, Ju and August, in different situations; the o where the sun cannot shine upon it, until o'clock, A. M., and the other, where his ra will fall upon it, at half-past 5. Now mark t result. The bees in the hive where the warm of the sun reaches them at half-past 5, w be seen leaving their hives at that hour, whi those of the other hive, remain within until o'clock, one hour and a half later. Thus may be seen, that it is important to so pla our hives, that they will receive the morni sun. If the bee-house front the south, it wou be well to have a movable shutter at the ea end, to be raised during the summer; say t feet space opposite the end hive, to be th open, and closed at pleasure.

Milk for Children.

A VERY IMPORTANT SUBJECT.

The brief article in our last last number, at page 93, alluding to this subject, has called forth a number of inquiries for further information. We can not devote our space to better purpose than in giving entire the following essay written for the Western Lancet, by Dr. J. U. Heckerman, of Tiffin City, Ohio. We trust every one having the care of children whether in city or country, will read it carefully. It is generally an easy matter to obtain farrow cow's milk not only for children "brought up by hand" but also for those weaned at the age of 12 to 15 months, before they have teeth enough to masticate solid food, and who consequently live much on cow's milk. Whether Dr. H's. conclusions are entirely correct or not, it is certainly better to err on the safe side, especially when, as now, scarcely half of the children born attain the age of three years.—Here is what Dr. Heckerman says:—*American Agriculturist.*

Except bread alone, there is perhaps no article that enters so largely into the nutrition of man as that of milk. As food and drink, it is extensively consumed by the adult portion of our race, it coustitutes the exclusive nourishment of nine-tenths of all children under twelve months, and forms the chief diet of the remaining one-tenth.

The chemical and medical properties of milk have long been made the subject of scientific investigation, and long has the writer in vain looked for something from the pen of a senior observer on the point of which he now wishes to direct attention.

It has ever been a desideratum in the rearing of children who are denied the breast of a mother or nurse, to procure milk from an animal in which it approaches nearest to that of the human female, and which shall uniformly have the same constituent properties.

In looking over the tables which are given of the constituents of milk, we seldom meet two authors who agree in their observations; indeed, so great are the discrepancies, that they only serve to confound us in confusion. This circumstance can be accounted for by the different animals experimented upon, the season of the year, the character of the food afforded, and the period of pregnancy or non-pregnancy of the animals at tho time of the experiments.

Taking the cow, we find that exercise and food, among other things, greatly affect tho quality of the milk. The milk of cows kept in the byre contains a larger amount of butyrine than is afforded by animals running at large, while the milk of the latter abounds more in caseine. So great, indeed is the influence of food upon the secretions, that, when cows are fed upon bitter or strong-smelling grass or herbs, the taste and smell of such grass is imparted to the milk.

Milk, we have already said, forms, the chief diet of that unfortunate class of infants, who are reared by dry nursing, and it is estimated that three-fourths of these die; indeed it has been said that, in London, this mortality amounts to seven-eighths of the whole number. Be this as it may, we do know the mortality to be very great, sufficiently so, at least, to demand the earnest attention of every physician.

Standard authors direct children who are thus reared, or who have been early weaned from the breast, to be supported upon milk largely diluted by water and sugar, without, however, any reference to the condition of the animal from which the milk is derived. This we hold to be a serious defect, to be especially so considered, when the remedy is at hand, yet seldom or never used for lack of information upon the subject.

Lasigne found that the milk of cows far advanced in pregnancy, contains neither caseine, sugar of milk or lactic acid, but abounded in albumen and uncombined soda; while from the same animal, shortly after parturition, the three first named substances were found, and albumen was entirely absent.

It is now the received opinion, that upon the accession of a peculiar condition, a woman should no longer furnish nourishment to a former child, and that such continuance proves detrimental to the health of both parties. These views are confirmed by experience, and by the habits of inferior animals.

If the milk of a woman in this condition afford improper nutriment to a child, surely the same fluid from a cow, in like condition, can not be proper. Remembering then, that cows, on an average, are pregnant three-fourths of the whole year, the inference must be that the milk ordinarily derived from these animals is

not of a proper character to constitute the diet of infants.

With a view to remedy this universally existing evil, I would suggest to the profession the propriety of having milk cows spayed, in order to procure milk of a uniform consistency. The act of spaying is performed with facility, and is unattended with danger, the only precaution necessary being that no food be given for twelve to fifteen hours, and the milk drawn immediately before the operation; the animal becomes kindly disposed, is easily kept, will yield better, and a larger amount of milk in a given time, and is with great ease brought into a marketable condition.

The steps of the operation upon the cow are the same as upon the calf or the sow, except that it is important to place her upon the right side, unless the operator be left handed. The best time for operating is about four weeks after parturition, as the future amount of milk will depend upon the quantity given at the time of the operation. For some weeks after, the secretion of milk will be small, but will gradually increase until the amount previously given is furnished which we have known continued without interruption (of course less in winter than in summer) for the space of ten years.

It is not expected that every father can be circumstanced to keep a cow for the accommodation of his child; but if physicians were to direct the attention of those who keep cows to the above facts, it would be found advantageous to keep the spayed instead of the ordinary animal, and the proprietors of milk furnishing dairies would readily furnish the supply, if the demand was made. The above facts briefly stated we think of sufficient importance to claim the attention of every medical practitioner, as furnishing him the means of preventing much suffering on the part of advanced infancy and saving the domestic idol in the circle of many grateful friends.

Sowing Peas, &c.—We have generally regarded the first week in February as the best time to sow early peas, beets, parsnips, carrots, salsity, cabbage, lettuce, and many other early vegetables. We recommend to gardeners therefore, to hold themselves in readiness to catch the first good weather after the frost is out of the ground to sow the above seeds.

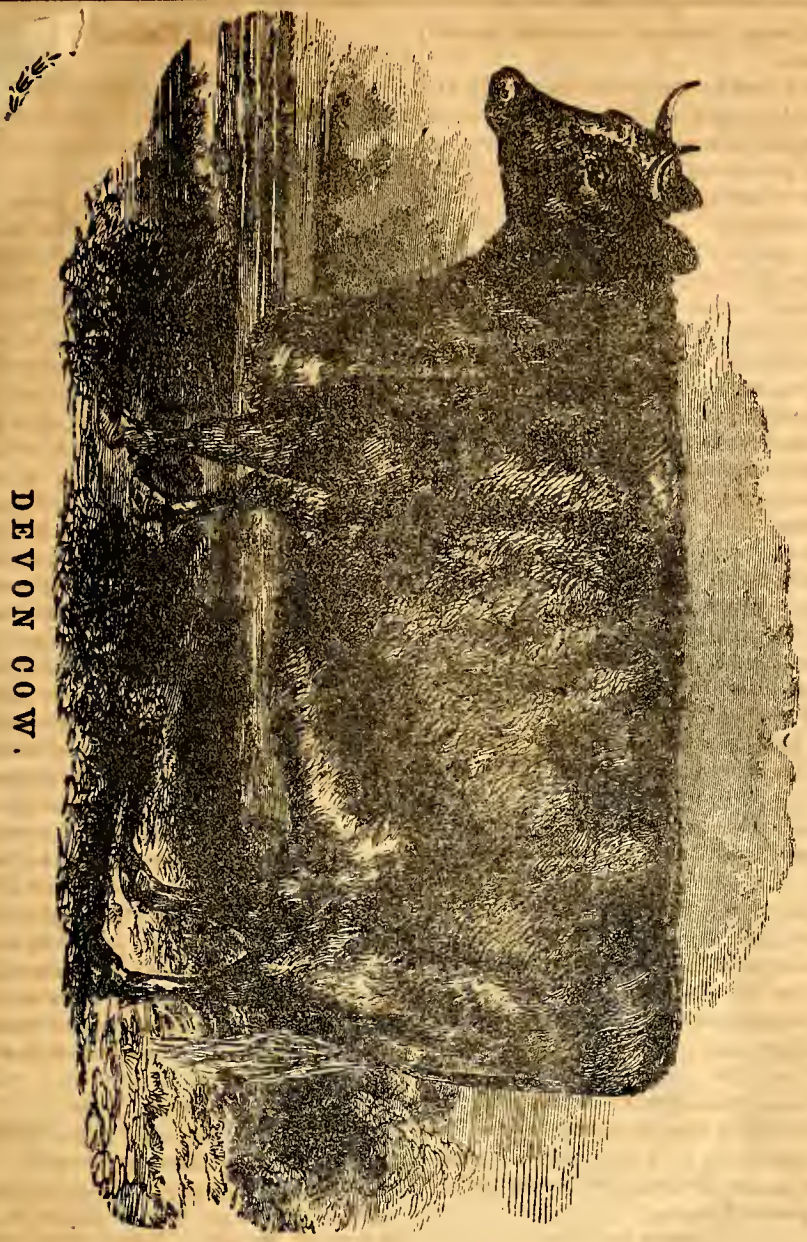
Eloquent Extracts.

We quote the following extract from an address delivered by Hon. J. W. Miller, before the New Jersey Agricultural Society, at Camden.

The epochs through which our globe has passed have been characterized by the names of various metals. There has been the golden age, the silver age, and the iron age. The era in which we might be called with propriety the quick silver age; for everything seems to be on the move. Each individual particle quivers in trembling haste to run upon its neighbor, and thus form a massive body, which when once formed, rolls into some crooked direction which neither mathematics could calculate, nor wisdom foretell. Politics, religion, manufactures, navigation, every art, seems pregnant with revolution heaving into new birth. Even Agriculture the oldest and most universal of human pursuits seems inspired by the genius of innovation. Let not, therefore, the old farmer, surrounded by his broad acres, suppose that he can entrench himself behind the natural advantages of soil and location, and defy the inroads of modern improvement; for before he is aware, some invention of art or discovery in science, may deprive him of his natural superiority. Let him remember that in these days of marvelous invention soils may be manufactured, and lands transmuted; that under the influence of new fertilizing agents, and an improved mode of cultivation, neglected saud plains and barren hills are brought into successful competition with the richest alluvial lands; and wheat and corn, vegetables and fruits are made to flourish, where neither grass nor grain ever grew before.

The Louisville Courier pays the following tribute to the occupations of a farmer:

"If a young man wants to engage in a business that will insure him, in middle life, the the greatest amount of leisure time, there is nothing more certain than farming. If he has an independent turn of mind, let him be a farmer. If he wants to engage in a healthy occupation, let him till the soil. In short, if he would be independent, let him get a spot of earth, keep within his means; be temperate, to avoid the doctor; be honest, that he may have a clear conscience; improve the soil, so as to leave the world better than he found it, and then if he can not live happy and die contented, there is no hope for him.



DEVON COW.

The Devon

Is among the oldest distinctively cultivated breeds in this country, as it undoubtedly is of England, and probably it is the most universal favorite. This popularity is well deserved, and it is based upon several substantial considerations. They are beautifully formed, possessing excessive fineness and symmetry of frame, yet with sufficient bone and muscle to render them perfectly hardy; and they are among the most vigorous and active of working cattle. They have great uniformity of appearance in every feature, size, shape, horns, and color. The

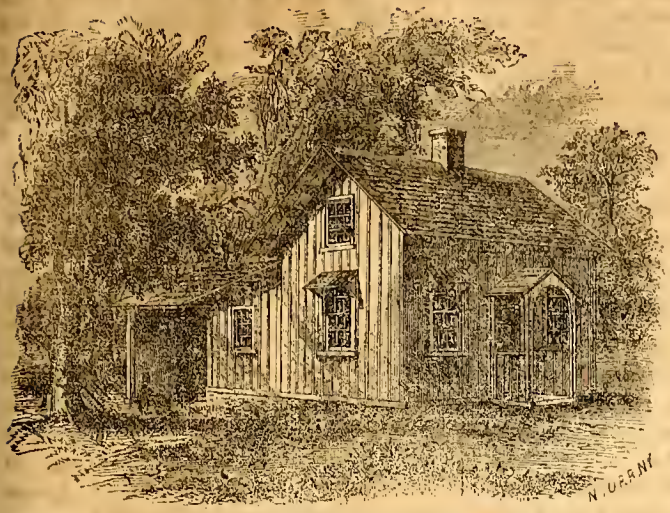
cows and bulls appear small, but the ox is much larger; and both he and the dam, on cutting up, are found to weigh much beyond the estimates which an eye accustomed only to ordinary breeds, would have assigned to them. The flesh is finely marbled or interspersed with alternate fat and lean, and is of superior quality and flavor.

The cows invariably yield milk of great richness, and when appropriately bred, none surpass them for the quantity of butter and cheese it yields. Mr. Bloomfield, the manager of the late Lord Leicester's estate at Holkham, has by careful attention, somewhat increased the size, without impairing the beauty of their form, and so successful has he been in developing their milking properties, that his average product of butter from each cow, is 4 lbs. per week for the whole year. He has challenged England to milk an equal number of cows of any breed, against 40 pure Devons, to be selected out of his own herd, without as yet having found a competitor. Although this is not a test of their merits, and by no means decides their superiority, yet it shows the great confidence reposed in them by their owner. The Devon ox, under six years old, has come up to a nett dead weight of 1,593 lbs.; and at three years and seven months, to 1,316 lbs., with 160 lbs. of rough tallow.

Description. The Devon is of medium size, and so symmetrical, as to appear small. The color is invariably a deep mahogany red, with usually a white udder and strip under the belly; and the tuft at the end of the tail is red while they are calves, but white in the older animal. The head is small, broad in the forehead, and somewhat indented. The muzzle is delicate, and both the nose and the rings around the eye, in the pure breed, are invariably of a bright, clear orange, The cheeks and face are thin and fleshless; the horns clear, smooth, and of a yellowish white, handsomely curved upward. The neck is small and delicate at its junction with the head, but is well expanded in its attachment to the breast and shoulders. The last has the true slant for activity and strength, in which it excels all other breeds of equal weight. The barrel is round and deep, with a projecting brisket. The back is broad and level; the flank full; hips wide; the rumps long; the quarters well developed, and capable of holding a great quantity of the most valuable meat. The tail is on a level with the back, and gracefully tapers like a drum-stick, to the tuft on the end. The legs are of peculiar delicacy and fineness, yet possess great strength. The skin is of medium thickness, of a rich orange hue, pliable to the touch, and covered with a thick coating of fine, soft, curly hair. The Devon is intelligent, gentle, and tractable; is good for milk, and unsurpassed for the yoke and for fattening. No animal is better suited to our scanty or luxuriant hill pastures than the Devon, and none make a better return for the attention and food received. They ensure a rapid improvement when mixed with other cattle, imparting their color and characteristics in an eminent degree. Several importations have been made into this country within the last 30 years, of the choicest animals, and though not yet numerous in the United States, we possess some of the best specimens that exist.

BEEF HAMS.—The finest beef hams are made by cutting out the entire bone of the hind-quarter, then rubbing in the salt and sugar, the same as described for pork hams, turning them over and rubbing them every day for one week. After this they are hung up to drip in a cool dry place for three days. They are now taken down and rubbed all over, on a table or bench, with some fine salt, black pepper and cloves, all ground together. About one ounce each of salt and pepper and half an ounce of cloves are sufficient for thirty pounds of meat, but the exact quantity cannot be given. No person can go wrong if he rubs every part of the whole surface of the ham with some of this salt and pepper composition. The ham is now fit to be rolled. This is accomplished by rolling it into a cylindrical form, swilling it round from the narrow to the thickest end, and hanging it up to dry for about ten days before it is used. It is cut in round slices for frying by commencing at the butt end. A stout cord is used to swill, or tie such hams, and it must be looped or turned under on both sides along the coils of the cord, so as to have every coil firmly bound and held in place when the ham is being cut in slices for daily use. Hams made in this manner are the finest in the world—a luxury.

Smoked beef is to be found in abundance in our markets, but it is a poor eatable of the meat kind in comparison with beef prepared as described We hope some of our farmers will make some such beef hams this fall for family use. They will not keep in summer weather so well as smoked beef—so it is said—but of this we are not certain.—*Scientific American.*



PLAN.

From Allen's Rural Architecture.

Rural Cottage.

This cottage is 10 feet high, from the sill to the plates, and may be built of wood, with a slight frame composed of sills and plates only, and planked up and down (vertically) and battened; or grooved aud tongued, and matched close together; or it may be framed throughout with posts and studs, and covered with rough boards, and over these clapboards, and lathed and plastered inside. The first mode would be the cheapest, although not so warm and durable as the other, yet quite comfortable when warmed by a stove. On the second plan of building, it will cost near or quite double the amount of the first, if neatly painted. A small brick chimney should rest upon the floor overhead, in the side of which, at least a foot above the chamber floor, should be inserted an earthen or iron thimble, to receive the stove-pipe and guard against fire; unless a flat stone, 14 to 16 inches square, and 2 to 4 inches thick, with a pipe-hole—which is the better plan—should rest on the floor immediately over the pipe. This stone should be, also, the foundation of the chimney, which should pass immediately up through the ridge of the roof, and, for effect, in the center, longitudinally, of the house. Such position will not interfere with the location of the stove, which may be placed in any part of the room, the pipe reaching the chimney by one or more elbows.

INTERIOR ARRANGEMENT.

The main body of this cottage is 18 by 12 feet, with a lean-to, 8 feet wide, running its whole length in rear. This lean-to may be 8 or 9 inches lower, on the floor, than the main room, and divided into a passage, (leading to an open wood-house in rear, 10 by 12 feet, with a shed roof,) a large closet, and a bedroom, as may be required; or, the passage end may be left open at the side, for a wood shelter, or other purpose. The roof, which is raftered, boarded, and shingled in the usual mode, is well spread over the gables, as well as over the front and rear—say 18 inches. The porch in front will give additional convenience in summer, as a place to sit, or eat under, and its posts so fitted with grooves as to let in rough planks for winter enclosure in front and at one end, leaving the entrance only, at the least windy, or stormy side. The extra cost of such preparation, with the planks, which should be 1 1-4 or 1 1-2 inches thick, and jointed, would not exceed ten or fifteen dollars. This would make an admirable wood-house for the winter, and a perfect snuggery for a small family. While in its summer dress, with the porch opened—the planks taken out and laid overhead, across the beams connecting the porch with the house—it would present an object of quiet comfort and beauty. A hop vine or honeysuckle might be

trained outside the posts, and give it all the shade required.

In a stony country, where the adjoining enclosures are of stone, this cottage may be built of stone, also, at about double the cost of wood. This would save the expense of paint, or wash of any kind, besides the greater character of durability and substance it would add to the establishment. Trees, of course, should shelter it; and any little out-buildings that may be required should be nestled under a screen of vines and shrubbery near by.

This being designed as the humblest and cheapest kind of cottage, where the family occupy only a single room, the cost would be small. On the plan first named, stained with a coarse wash, it could be built for $100. On the second plan, well-framed of sills, plates, posts, studs, &c., &c., covered with vertical boarding and battens, or clapboarded, and well painted in oil, it might cost $150 to $200.—Stone, or brick, without paint, would add but little, if anything in cost over the last sum.—The ceiling of the main floor is 8 feet high, and a low chamber or garret is afforded above it, into which a swing-step ladder ascends; and when not in use, it may be hung to the ceiling overhead by a common hook and staples.

The difficulty of Judging between first-rate Animals.

The following, from the *Mark Lane Express*, may be read with profit by those acting as judges at our public fairs. The recommendation in the last paragraph may be useful to State Societies:

"Sir:—Allow me to offer a few remarks on this subject, as applicable to the approaching meetings of our leading agricultural societies, now close at hand.

"The difficulties which are often experienced by most competent judges, in deciding between two really first-rate animals of a first-rate sort, are greater than the majority of people who have never acted in the capacity of judges have any idea of. I am happy to say that at the meetings of the Royal Society such cases frequently do occur, and, I hope, always will, and with the wish that what I here assert may tend to assist judges on their laborious duties, I am induced to trouble you with these remarks.

"I will take an instance of two first-rate short-horned bulls, neither of them having a faulty point. Judge A. says, 'what a superb back No. 1 has!' B. says, 'But look at that depth of carcase in No. 2!' 'But the length of quarter in No. 1!' continues A.; and in return B. draws attention to the silky texture of the skin of No. 2. The question is here put to Judge C. who *should* decide the case; but he has to balance, in *his* mind, whether a superior back is more to be considered than extraordinary depth of carcase; and again, is a first-rate quality of hide equivalent to an unusual length of quarter! And thus points, without having some definite value attached to them, might be compared one against the another *ad infinitum*, without ever coming to a satisfactory conclusion.

"Now, what I wish to see is, a definite value affixed to every point in the perfect animal, and when such cases of nicety as I allude to do occur, let the judges take point by point, and compare value in numbers, and then the animal commanding the highest amount would be the one selected. If the perfect animal were 50, the component parts might be something as follows:

	Bull.	Sheep.	Boar.
General Appearance,	8	12	10
Back, (length and width,)	8	10	5
Chest, - - -	6	4	4
With of hips and loin,	5	4	5
Depth, (rotun. of carcase,)	5	5	4
Quarters, - -	5	3	3
Head, - -	4	4	9
Hide, (or wool,) -	4	5	2
Bone, - -	3	3	2
Shortness of legs, -	2	1	2
	50	50	50

"This table is merely on a rough scale; but I think if the committee of the Royal Society would devote one of their meetings to the consideration of the subject, their time would not be wasted; and a scale made under heir direction, similar to the above, would be received by the agricultural public as an authentic data to refer to.

"Hoping that these remarks may draw the attention of our great stock-breeders to the subject. I remain yours, etc.,

X. X."

How are your Bees this Winter?

Some people think bees not worth their attention. We do not so think. We have kept them for twenty-five years, and they have always rapaid us for their care in abundance of delicious honey, every year. They require *some* care, it is true. So does everything from which we get any benefit. Some think that bees require a great deal of *science* to manage them. It is not so. They are just as simple in their management as a hen with a brood of chickens—but not in the *same* way. *Ignorant* people talk about "luck" in bees. So they do in everything else they have. Some seasons are better for bees and honey-making than other seasons; but these must be understood. A bee will not be robbed with impunity in a bad honey season any more than a cow or a sheep will: and the season and the temper of the hive must be consulted, and not take honey from them when required for their own subsistence.

The last was a bad bee year. On account of the cold and the wet in May and June—the two bee months of the year—they neither swarmed well nor did the flowers yield their usual supplies of honey. Therefore the honey-crop was light, and some folks complain that they had no "luck!"

To manage bees well you must have a good, understandable treatise on their manage nent, by a man who knows all about them. Quinby is one of the best authors. His book is to be found in all agricultural book stores. Consult him, and then, with your own common sense added, you can not go far amiss in your bee culture.

Winter is the best time to buy and remove bees, if you have none, and we can safely advise every country dweller to get a swarm or two, and raise their own honey. Try it.—*Am. Agriculturist.*

To make Lard and Tallor Candles.—The following method of making the above named candles is described in the New England Farmer by a correspondent: "I kept both tallow and lard candles through the last summer, the lard candles standing the heat best, and burning quite as well, and giving as good light as tallow ones. Directions for making good candles from lard: For 12 lbs. of lard take 1 lb. of saltpetre and 1 lb. of alum; mix and pulverize them; dissolve the saltpetre and alum in a gill of boiling water; pour the compound into the lard before it is quite all melted; stir the whole until it boils, and skim off what rises; let it simmer until the water is all boiled out, or till it ceases to throw off steam; pour off the lard as soon as it is done, and clean the boiler while it is hot. If the candles are to be run, you may commence immediately; if to be dipped, let the lard cool first to a cake, and then treat it as you would tallow."

Wood Ashes.

We have known lime to be applied in the spring, and ashes in the fall succeeding, to a sterile loamy soil, with a most decided beneficial and durable effect. In one instance, we think the land had no other manure, except these two first dressings, for several years, the straw and hay being all taken away. Yet the crops were very good, and after some five or six years, when the barn-yard and stable manure were applied, they appeared to be remarkably efficacious.

Leached ashes mixed with plaster, in the proportion of two or three parts of ashes, with one of plaster, make an excellent application to corn hills, being dropped in the furrow either before or after the grains are deposited, and covered with them—particularly on cold loams, clays, or low moist land.

This stimulates the growth of the young corn, and prevents the depredations of insects that work about the kernel.

Dry asbes may be applied to great advantage on corn that has a sickly and dwindling appearance, and may be from four to twenty-four inches in height, being infested with heart worm, web-worm, blue lice—or some unseen foe—or pining for the want of alkalies. About a table spoonful may be cast from the hand right on the corn. The larger portion of course, will fall on the ground, and what remains in the heart, at the junction of the leaves will, with the dews and rains, form a strong ley that will destroy the insects that harbor about the young plants.—*New Jersey Farmer.*

Tomato seed may be sown in a hot-bed, any time after the 10th of February, to raise plants for an early crop.

Horticultural.

On Pruning Grape Vines.

During the present month, or as soon as the severe cold winter is over, is a proper time to prune hardy grape vines. The vine culturists of Cincinnati generally commence this work as early in February as the weather will admit.—If done in the autumn, as some have recommended, there is danger that the winter may kill the ends of the vines. And if deferred until the sap is in motion in the spring, the vines will bleed where cut. Besides, the present is a season of comparative leisure, and more pressing duties will occupy the attention of the farmer and gardener the coming month, so that if deferred till then, this operation is liable to be neglected, or hurriedly performed.

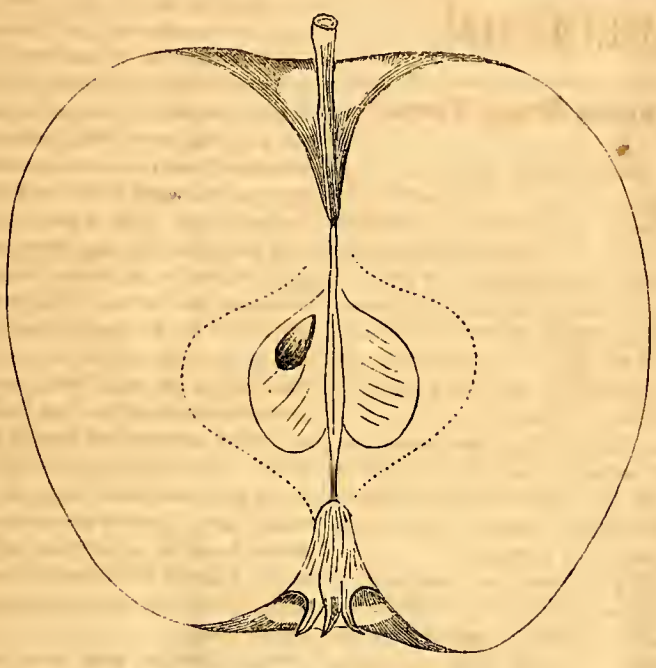
Most persons who devote any space at all to fruit growing, now have a grape vine or two. In fact no *space* of ground is required for this purpose, except to give the roots a chance to spread in the earth, and train the vines against the side of the dwelling or other building. This is the usual practice among farmers and others who devote but little attention to horticulture; and it is mainly for this class that we are now writing, as all professed horticulturists should possess books that give more minute instructions on these subjects than the columns of a paper will allow.

The great error with most persons who have grape vines, is to *prune too slightly*. To an inexperienced mind it seems quite unreasonable and contrary to nature, to cut away every year the greater part of the vine, with a view to the increase of the crop; and yet such is found to be the only successful mode of treatment. It is true that occasionally a strong and healthy vine, with rich soil and a favorable season, may produce a bountiful crop of fruit with little or no pruning, and thus seem to contradict the theory just stated; but such cases are only occasional, and *for a single season;* for the vine thus allowed to over bear is sure to exhaust its energies, so that for a year or two afterwards little or no fruit will be produced.—But the more common result of insufficient pruning is, the crop of fruit which promises to be very abundant fails to attain its full growth, or to ripen perfectly—then the disappointed owner blames the season or the soil, instead of his own *greediness* or negligence, in allowing too many bunches to remain in summer, and too much wood the previous winter.

In pruning grape vines, remember that the fruit is produced on new shoots which will start only from the wood of the past year's growth, (as there are no buds on older wood.) And in order to prevent the sap from running to the tops of the vines, and there forming leaves and new shoots, to the loss of the fruit, as it naturally would do, the strong shoots of last year's growth are to be cut off so as to leave only from three to six good buds, according to the age and strength of the vine, and only a limited number of these fruit bearing shoots should be left, so as to allow plenty of space for the side shoots, fruit and leaves to get sufficient sun and air. Then all the weather and surplus shoots should be cut off close to the old wood, leaving a few of them nearest the ground with one bud only, to produce new wood for the succeeding year.

Where the vines have been neglected, as is often the case, so that the tops are quite too high and the branches too numerous, it is necessary to cut off a large portion of old and new wood together—the more of the *old* the better—leaving only the new shoots that spring from nearest the ground, and shortening these as above directed. Then by allowing a few new shoots to grow from the lower parts of the vine each year, for bearing fruit the succeeding year, and cutting away the wood which bore fruit the preceding year, we have what is called the *renewal* system of pruning, which is found to be the best for our American grapes, for trellis or wall culture. For vineyard culture a different system is practised, which is practised, which is fully detailed in the books.

The amount of wood to be left in pruning, or the number of bunches of fruit that a vine can safely bear, depends of course on its size and vigor, and the soil, location, culture, etc., so that no definite rules can be given. A little experience and observation will enable the owner to judge pretty correctly on this point. The best rule for pruning that we have seen is this: "Direct your gardener to prune the grapes severely, then go yourself and cut out half the wood that he has left." I would apply the same rule to young fruit in summer,—the bunches remaining would be enough larger and better ripened to compensate for all destroyed. —*Ohio Cultivator.*



From the American Fruit Grower's Guide.

The Fall Pippin.

This is unquestionably an American seedling, and probably from the "White Spanish Reinette," which it closely resembles in all but its period of ripening. Great confusion exists among growers respecting it, as the Holland Pippin is often grown under this name as well as its parent. It is extensively grown at the West and in the Eastern states, and universally succeeds well; but where the soil is of a clayey nature, on the alluvial bottoms and deep prairies, it does not answer as well. Tree, of growth vigorous, shoots, dark, diverging or spreading, becomes large.

Size, large; *form*, roundish, conical, flattened at ends; *color*, greenish yellow, until fully ripe, then rich yellow with a faint blush, when grown in good soil and exposed to sun; *stem*, long, moderately stout; *cavity*, deep, round; *calyx*, above medium, with segments in divisions; *basin*, deep, wide, and open; *flesh*, yellowish white, tender, sub-acid, aromatic; *core*, medium, for size of fruit; *seeds*, ovate. *Season*, October to December.

Raspberry—Pruning & Culture.

Too little attention is given to this delicious fruit in the Western country. Very few persons know anything at all of the finer varieties of raspberries—the native species alone being cultivated. But with the spread of horticultural knowledge there will doubtless soon be improvement visible in this as all other departments.

Where the bushes need to be protected in winter, as is generally advisable for the best varieties, the pruning should be done in autumn, before covering. But for the hardy varieties, and where no protection is practised, the pruning should be done early in the Spring.

Remember in pruning that the stems are biennial—that is, living only two years—hence those which bore fruit last year are all to cut away, and those of last year's growth are to be left for the next crop of fruit. Only the strongest of these—say three to four stems to a hill or root—should be left, cutting away all the surplus ones; then shorten the remainder, by cutting off about one-third of their length, or so as to leave them from three to four feet in height, according to the variety and strength of the bushes.

Next apply a good dressing of old manure to the ground, and spade or fork it in, and keep clear of weeds during summer, also keep the bushes tied to stakes, or supported by poles along the sides.

The following remarks by a writer in the *Horticulturist* for the past month, will be useful:—*Ohio Cultivator.*

From a given amount of money, the Raspberry will, I think, return a larger amount of enjoyment and profit than any other fruit—the grape not even excepted. Raspberries may be grown in almost every variety of fertile soil with nearly equal productiveness, but with greatly varied luxuriance, two constant requisites being maintained—depth and richness of soil.

In manuring for the raspberry, a deep alluvial soil, rich in vegetable mould, will require a light dressing of well-rotted stable manure, with a top dressing of ashes immediately after planting, employing from ten to thirty bushels to the acre. For a light sand or loam, a liberal dressing of compost will be necessary; to four loads of vegetable muck, add one load of rich barnyard manure, and from four to eight bushels of unleached ashes; and if lime is cheap, it may be advantageously used to twice the amount of the ashes, together with salt lye, which is the best addition to the compost that can be used for this fruit. Mulch the roots well, to keep the ground free from weeds; but the grand point to be insisted on is depth of culture, which leaves a constant supply of moisture, obviates the danger of too much wet, and gives scope for the ever active roots to hold their revels, which they manifest in a profusion of fruit.

For the growing of good fruit it is not *necessary* that the canes should be supported, though it is advantageous, and also convenient in picking. The most obvious method is to support the canes of each hill with a stake; but a more effective and convenient way would be to stretch a wire along the rows, supported by a firmly braced post at each end, and at intervals of about thirty feet drive stakes into the ground to support the wire at an elevation of about three feet, or four feet for the most vigorous growers; spun yard will answer.

The rows should be four feet apart. North of the latitude of Philadelphia (and there also) lay down and cover the canes in winter. When the bearing season is at an end, the old canes should be cut out, and the shoots that have sprung up for next year's bearing should be thinned to the proper number, varying according to the strength from three to five; remembering that the crop is made or marred the year previous to its production. In choosing plants, the root, and ripeness and solidity of wood, not length of canes, should govern the choice; large canes, with small roots, are undesirable.

My first choice as a market fruit, is the Hudson River [True Red] Antwerp, for its size, exceeding productiveness, and its firmness, which enables it to bear transportation. The current year one thousand dollars net were realized here from one acre of this variety. For field culture it deserves its celebrity, but for the garden it is much excelled by the seedlings of Dr, Brinkle. Fastolf is nearly equal in productiveness, but a much more vigorous grower, and somewhat more hardy. Its rich berries almost burst with their fine juice, and do not bear carriage well.

Franconia is a vigorous grower, and rather more hardy than either of the above, with large, dark-colored fruit, bearing carriage nearly as the Antwerp; it is a late bearer, of high flavor, and especially excellent for cooking.

Knevett's Giant is truly gigantic, excellent for the dessert, and for preserving. Rivers' new large-fruited Monthly had been a disappointment till I determined to thin out offsets, and let no more grow than were required for fruiting, and that had the desired effect; and it has proved the most productive that I have cultivated, more than twofold of the Red Antwerp.

The Yellow Antwerp is a very good variety, but its berries are so much softer than Hudson River, that it is not grown for market. As Elliott remarks in his *Fruit Grower's Guide*, "it will soon give place to Brinckle's Orange and Colonel Wilder, which are far better varieties."

Ohio Ever-bearing, by those who like the black-cap variety, will be greatly prized, bearing as it does profuse clusters. Catawissa has much the habit of the last, but the fruit hitherto has been comparable to it in flavor.

Col. Wilder is a white berry, of brisk, rich flavor—productive, excellent and hardy.—Brinckle's Orange is among raspberries what the Newtown Pippin is among apples. In conservative, he remarked: "This is by far the best raspberry in cultivation." It should have been called Opal instead of Orange, its translucence suggesting the brilliant play of light of that gem, and its beauty is equalled by its excellence; it is very vigorous, hardy, and productive; continues long in bearing; most excellent in every respect for field and garden.

To make a Hot Bed for Grapes.

Hon. J. A. Corey furnishes us with the following method of making a Hot Bed, which we doubt not will be useful to many of our readers.

B. P. Johnson, Esq.:

Dear Sir—Believing that the following description of a Hot Bed for Grapes, just made by James M. Marvin, Esq., of this village, will be of practical utility to others engaged in the cultivation of the finest varieties of grapes, in this northern latitude, I send it to you for insertion in the valuable Journal of Agriculture. Perhaps I ought to state, that before determining definitely upon his plan for this grapery, Mr. Marvin examined several others, in massachusetts and other New-England States, and this may be regarded as the result of those observations, and is doubtless an improvement upon any other hot bed in this country.

The place selected is an open, free exposure to the sun, at the north end of the grounds attached to his private residence, the bed being about sixty feet in length, from east to west, and about twenty feet in width. This space was excavated to the depth of four feet, and a substantial stone wall built from the bottom, along the north side, to the height of ten or twelve feet from the surface of the ground. A sufficient number of substantial piers were also built, within about six feet of the out side of the bed to be covered with glass, sloping, roof like, from the top of the wall to the piers, in such a manner as to receive the rays of the sun during the whole day.

The excavation was then filled with the following fertilizing agents:

1st.	6	inches of coarse manure.
2d.	6	" of unslaked lime.
3d.	1-2	" of bone dust.
4th.	12	" of virgin soil.
5th.	8	" of manure.
6th.	2	" of lime.
7th.	1-2	" of bone dust.
8th.	12	" of virgin soil.
9th.	4	" of leached ashes.
10th.	6	" of stable manure.
11th.	2	" of stone lime.
12th.	1-2	" of bone dust.
13th.	12	" of natural soil.
14th.	3	" of ashes.
15th.	4	" of fermented manure.
16th.	6	" of virgin soil.
17th.	1-2	" of bone dust.
18th.	2	" of leached ashes.
19th.	6	" of virgin soil.
20th.	4	" of manure.

In addition to the above, about two cords of bones, from the slaughter-house, were broken up and well mixed with the other manures, in that portion of the bed where the roots are designed to be planted.

Sow Lettuce seed in the hot-bed any time after the 10th of February, if you wish to have it early.

The Carolina Cultivator.

RALEIGH, MARCH, 1856.

Good Land—And its Value.

There is perhaps nothing in which farmers show their discernment more than in properly estimating the value of land. We will here call attention to a few general principles which may be useful in coming to correct conclusions on this subject.

We will take it for granted that land which produces only enough to pay the cost of cultivation is worth nothing—merely worth having and nothing more—like a laborer that is hired for his board and clothing. Land then has a money value when it will under proper care produce a crop worth more than the cost of cultivation. Thus, for example, if it cost as much as the price of eight bushels of wheat to grow a crop of wheat on one acre, then land which which will yield only eight bushels to the acre has no value. But if land which yields eight bushels to the acre is just worth cultivating, and no more, how much is land worth that will yield nine bushels to the acre? Perhaps some one may answer that it is worth as much as a bushel of wheat, and that when wheat sells for one dollar a bushel, an acre which will produce one bushel of wheat more than the cost of cultivation, is worth one dollar. A little reflection will however show that such a valuation would be entirely wrong. The money paid for land like any other investment should be required only to return a fair interest on its cost. Therefore if one bushel of wheat worth one dollar is the return made by an acre of land for one year, the value of this acre is the sum which would draw one dollar of interest. Supposing that ten per cent. is considered to be an adequate return for landed property, then an acre which yields one dollar's worth of produce above the cost of tillage is worth ten dollars. If six per cent. is considered to be a fair return, then it is worth sixteen dollars and sixty-six cents. At first sight it may appear unreasonable to maintain that land capable of producting eight bushels to the acre is worth nothing, whilst that which will produce nine may be worth from ten to sixteen dollars per acre. But every prudent man knows that it is the same thing as giving money away to pay for that which will bring nothing in return. If he pays out money he will expect to receive something for interest on the amount expended.

Reasoning in the same manner as above it will be easily seen that land which will produce eight or ten bushels to the acre above the cost of cultivation will be worth from one hundred to one hundred and fifty dollars per acre. Of course a great deal will depend upon the rate of interest, and therefore upon the abundance or scarcity of capital.

We have used the expression "cost of cultivation," and we mean thereby the whole cost of growing a crop, which beside the cost of labor and seed includes the expense of keeping up fences and taxes, and also another item which is frequently omitted, namely the wear of the land, or rather the amount which spent in manuring will make the land as good as it was before the crop was grown. For it is to be taken for granted that no wise farmer will let his land become poorer from cultivation.—And therefore a larger price should be paid for land that will "wear well," than for that which requires a great deal of manuring to keep it up.

The principle which we have endeavored to explain is perfectly accurate, and still there is danger of its being misunderstood in practice. We will therefore state it again in a somewhat different manner. To find the value of land we must know the worth of the crop which it is capable of producing one year with an other; and we must know also the cost of producing a crop. If the cost of production is less than the value of the crop, then the land is worth a price. It is worth the same which invested at interest would bring as large a nett income as that yielded by the land, after paying all expenses.

From what we have stated above it will be seen that there may be a difference of only a few bushels in the yield of two pieces of land, and yet the one may be not worth having, whilst the other is worth twenty, fifty or even a hundred dollars per acre. And since it does not cost much more to cultivate the same piece of land whether it be rich or poor, it follows that wherever manure can be had for a reasonable price it will prove the cheaper plan for the farmer to make his land rich. For the same reason it will generally be found to be a more profitable investment for him who has spare capital to spend in improving the land he has rather than buy more. But still there is land which it would be unwise to spend anything upon in the way of improvement, unless manure were cheaper than it is likely to be soon. For our own part, we are quite a believer in the rule of an old farmer, who practiced on this precept—"Good land," said he, "is cheap at any price, provided you can pay for it, poor and is dear at any price."

Guano.

This manure has been used for a considerable time, and yet there is a good deal of uncertainty in regard to its value. It is agreed that its action during the first year after being applied is always, or at least with very few exceptions, quite apparent, often more than doubling the crop. So that even at the present high price at which it is sold, farmers who have used it are satisfied that a full return for the expense is made during the first year.—Under such circumstances there can be but one consideration which should prevent the free use of Guano wherever it can be obtained. That is, if it impoverishes the land to such an extent that it will not continue to yield large crops, even with the application of Guano or other available manure. Some have maintained that such is the case. That the Guano acts only as a stimulant, enabling the plant to draw a large amount of plant-food from the soil and supply only a small amount itself. If it were strictly true that Guano acted mainly as a stimulant, so as to assist the plant in taking up the elements already in the soil, it would not follow that its use should be discontinued. But it would materially affect the price which should be paid for it. Plowing and draining are common means for obtaining an increased yield, but it is plain that no new material is thereby added to the soil. These operations only change the condition of the soil so that plants can take the elements already present. They might therefore be called stimulating processes. A good supply of rain, independently of the nourishment brought down from the air, stimulates plants to take up elements already in the soil. So that rain water may be properly called a stimulant, and its effect is to exhaust the soil, for it enables plants to take up a larger amount of the elements of fertility than they otherwise would. A good crop necessarily leaves the land poorer than it was before. Some one may object that there are soils which have been cultivated for ages, without manure being added, and yet show no signs of failing strength. But this only happens in soils in which by natural causes new elements are furnished to supply the place of what is removed. Just as the ocean never dries up although evaporation has been going on for centuries. There are soils of which nearly the whole mass consists of the elements necessary to plants, but these are only rare exceptional cases. Generally the material which may be used as food by plants exists in the soil in limited quantity. And every crop grown on such a soil diminishes the amount, and therefore so far exhausts the land.

Guano, then, exhausts where it stimulates to the production of a crop containing a larger amount of matter drawn from the soil than was contained in the Guano itself. If the yield is greatly increased it is easy to see that it cannot be *made* of the few hundred pounds of Guano added to the land. That it does not furnish *all* the elements found in plants is plain, for it does not contain them, although it does supply some of the most important

The chief elements of Guano are phosphoric acid and ammonia. Beside these there are smaller quantities of nearly all the elements found in plants. These small quantities of different substances, no doubt have some effect upon the results obtained by the use of this manure, but it would not do to pay any thing like the price of the whole for the three. We may say then that the value of Guano depends upon the amount of phosphoric acid and ammonia which it contains, and a soil deficient in these elements will be rendered productive by

applying Guano. It may be that a large crop is obtained where only a small one grew before. It will not however answer to credit all the increase to Guano, although without it the increase would not have been obtained. It takes a great many different parts to make a watch, and if either is wanting the watch is imperfect, in fact does not exist. And no one will believe that the last part added makes the watch. It only contributes its share like all the other parts.

There is a difference of opinion in regard to the value of plaster (gypsum) when used with Guano. Plaster has been recommended as a good substance for fixing the ammonia of Guano, and we think correctly. It is true that if carbonate of ammonia and sulphate of lime, (gypsum) are mixed together, and permitted to become dry, the ammonia will evaporate, and leave the plaster. But if the mixture is kept moist, as it is in the soil, the sulphuric acid will then combine with ammonia, and render it much less volatile than the compound previously existing. But laying aside all theory in the matter, we have heard one of our best farmers say that guano produces much better results when mixed with plaster than when used alone. We would be glad however to have the experience of other farmers on the subject. Nothing is more wanted at present to place agriculture upon a sure footing than well conducted experiments, and no one can make them better than the intelligent farmer.

Exchanges.

GODEY'S LADY'S BOOK, for March has been duly received. It is as rich as ever in all the elegant attractions of literature and art adapted to the season.

ARTHUR'S HOME MAGAZINE for March is also at hand in good time, and appears to be an excellent number of a very useful periodical.

"FRANK LESLIE'S GAZETTE of Fashions and the Beau Monde," for February, has been welcomed with much delight by the ladies. It is rich and superb in their judgment.

We have received the February or second number of the "MONTHLY STETHOSCOPE and MEDICAL REPORTER," a new medical periodical just started in Richmond, Va., by Drs. Goodridge R. Wilson and Richmond A. Lewis, former editors of the Stethoscope, now defunct. It is a very promising work. Price $3. per annum in advance.

"The AMERICAN VETERINARY JOURNAL" for February is on our table for the first time. It is an excellent work, edited by George H. Dadd, M. D., and published by S. N. Thompson, Boston, at $1. per annum.

The February number of the INVENTOR, a useful and instructive periodical, published in New York, by Law Haskell & Co., is also before us. The price is $1. per annum. It is devoted to recent inventions, as its name imports.

We have received a copy of the printed "Catalogue of Pure Bred Short-Horns. Owned by B. & C. S. Haines, Elizabethtown, N. J., 1855. Persons interested in fine stock would do well to procure them. Edward O. Jenkins, printer, New-York.

The ECLECTIC for February has much fine reading from the best sources.

GRAHAM'S MAGAZINE for March has been received in good time. The reading is highly interesting, the embellishments ordinary, and the work-patterns superb.

New Books Received.

The American Bee-keeper's Manual: This is a practical treatise on the history and domestic economy of the honey-bee, embracing a full illustration of the whole subject, with the most approved methods of managing this insect thorough every branch of its culture, the result of many years' experience; By T. B. Miller, embellished with thirty-five fine wood engravings. Published by C. M. Saxton & Co., Agricultural Book Publishers, 140 Fulton St., New York—Price $1,00.

Sheep: Their breeds, management and diseases: By William Youatt; Published under the superintendance of the society for the diffusion of useful knowledge, with illustrative engravings—C. M. Saxton & Co., New York, publishers, price 75 cents.

Rural Architecture: Being a complete description of FARM HOUSES, COTTAGES, and OUT BUILDINGS, comprising wood-houses, workshops tool houses, carriage and waggon houses, stables, smoke and ash houses, ice houses, apiary or bee house, poultry houses, robbitry, dove-

cote, piggery, barns and sheds for cattle &c., &c. Also, the best method of conducting water into cattle yards and houses. By Lewis F. Allen. Beautifully illustrated; Published by C. M. Saxton & Co., N. Y., price $1,25. A valuable work for farmers.

New Music.

We are indebted to Wm. Hall & Son, 239 Broadway New York, for the following music for the Piano Forte, viz:

Souvenir d'Ecosse, by W. Vincent Wallace. This is a very pretty Fantasie of nine pages, for the Parlor which cannot fail to please.

Souvenir d'Andalouse, (Caprice Concert.)

Jerusalem, (Fantasie Triumphale.)

The Banjo, (Grotesque Fantasie—An American Sketch.)

These three pieces are by Gottschalk, and are all deservedly very popular. Persons wishing rather difficult, but beautiful pieces will do well to send for them. The N. Y. Times says, these pieces are written in a fluently brilliant style, and intended, of course, for the saloon or concert room. They are redolent of Gottschalk's peculiarities; for this young artist does not deem it necessary to keep in the ordinary sheep-walk of Art, but strikes out for himself, occasionally, to the great horror of the traditionists.

The Battles of Sebastopol, by Charles W. Glover, is a very fine, but not difficult, descriptive piece, in which several familiar airs are introduced.

Forget Me Not, (Romance,) by W. Vincent Wallace.

Florence Vane, (Ballad,) by W. Vincent Wallace.

Oh! The Old, Old Clock, (Song,) by J. A. Fowler.

Spring Holiday: A Cantata in three parts, designed for the use of female seminaries, academies, juvenile classes, schools, &c, and intended especially for concerts, exhibitions &c. By Charles C. Converse, words by C. M. Cady; Published by Firth, Pond & Co., No 1, Franklin square, New York. We are indebted to the author for a copy of this beautiful work. It consists of Solos, Duetts, Trios, Choruses, Recitatives &c., &c., which may be sung separately when the book is used in schools or classes, and at the close of a session the whole may be performed as one piece.

Miscellaneous.

Experiments with Guano.

BY S. FLINT, JR.

Mr. Editor: The season of leisure for farmers having arrived, it is a good time to make a note of the experience of each, and where we have made a satisfactory experiment, whether successful or otherwise, to spread the knowledge we have acquired before the readers of our valuable agricultural journals. In this way, we may commence operations another spring, *wiser*, if not better men. And to show you that I am willing to "practice what I preach," I purpose at this time to give you my experience the past season, in the use of guano. Before doing so, however, it may be well to tell why I was induced to use it at all. The article was never used in my neighborhood, till the spring of 1854, when several tons were purchased by various individuals in town, and applied in all manner of ways, on all kinds of crops. It not being convenient for me to obtain any, I concluded to watch the results, and profit by the experience of my neighbors. A good portion of the quantity purchased was spread on grass grounds. This, it was very evident, did not pay; while many, who applied it to other crops, expressed an unfavorable opinion of its usefulness. But a neighbor who had a field of newly turned sward, in a wet piece of ground, which was sowed to oats, used a small quantity on each end of the field, and as I passed by it often, I had a good opportunity to see its effects. Where the guano was applied, the oats grew to double the height and I have no doubt the crop was increased in proportion. Believing that "like causes produce like effects," and that "what man has done man may do," and having a similar piece of ground, that I intended to sow to oats, I purchased, last spring, four hundred and fifty pounds of guano, using four hundred pounds on the oat field, (which was 200 pounds to the acre) and reserving the remainder for miscellaneous experiments. The oat field was part of an old worn out mowing field, that had been cropped till it would not pay for harvesting; was pastured in 1852, mowed again the next year, and

plowed in the fall, sowed with oats in the spring of 1854, and oats repeated again last spring. Your readers may *guess* how much of a crop I should be likely to get, under such circumstances, without the guano; and with it, I have no doubt I shall get fifty bushels to the acre. I intended to have left a strip without guano and to mark the difference; but as it was not convenient or hardly possible, on account of the high wind when sowed, this expe-periment is all guess work; and I *guess* it paid.

My next experiment was on a field of potatoes. Here I can speak with confidence, because it was made as all experiments should be. The field was a piece of pasture land, that had been cropped occasionally, during the last twenty years, and then pastured again. In the spring of '54 it was fenced and what grew on it, which was but little, on account of the drouth, was turned under in the fall. I think the soil was in good condition, for on a field estimated to contain two and a half acres, I got this season five hundred and fifty bushels; and there are rocks enough on it to build a small city, but the soil is a light loam, and dry enough to work as soon as the frost is out of the ground. On four rows of potatoes, I put in the hill, twenty pounds of guano; which was not far from 200 pounds to the acre. When the potatoes were dug, the produce of these four rows was carefully measured, as was also the four adjoining rows, two on each side, and the guanoed rows produced a trifle more than five bushels the most, and, as the crop was sold at the stareh factory, I obtained for my sixty cents, a dollar and twenty five cents; which was more than one hundred per cent. profit; and by estimate, I find if I had put on the whole field 500 pounds, and it had done as well in proportion, I should have made some sixteen dollars by the operation. This, though on a small scale, was a very encouraging experiment. The expense of applying the guano was but a trifle, a man passing between two rows, and dashing a handful on five or six hills, after the potatoes were dropped, spreading it as much as convenient.

I also tried it on corn, at the rate of about 300 pounds to the acre. My object in this case was to see if the guano was equal to muck from the hog yard, with which the field was manured in the hill, except two rows, where the guano was used. The whole field was furrowed rather deep, for the purpose of dropping and covering the manure readily, before planting, but in these two rows, instead of manure, the guano was strown the whole length of the furrows, and the furrows nearly filled before dropping the seed. During no part of the season could there be discovered any difference between these and the adjoining rows. From this experiment, I conclude that 300 pounds of guano is equal for the corn crop, to twelve loads of manure from the hog yard, the manure from the yard being made by two hogs, in a year. Every man may calculate from his own experience whether this would pay. For my part, if I had the manure I should not buy the guano, but without the manure, I think the guano would pay.

This is my experience. Who comes next? —*Farmer and Visitor.*

The Farmer.

After what are called the fine arts and the liberal professions, however, there is, perhaps, no trade which requires so great a variety of knowledge and experience as farming. The innumerable volumes which have been written upon it in all languages, may satisfy us that amongst the wisest and most learned nations it has never been regarded as a matter very easily understood. And from all those volumes we shall in vain attempt to collect that knowledge of its various and complicated operations which is commonly possessed even by the common farmer,—*how contemptuously soever the very contemptible authors of some of them may sometimes affect to speak of him.* There is scarce any common mechanic trade, on the contrary, of which all the operations may not be as completely and distinctly explained in a pamphlet of a very few pages as it is possible for words illustrated by figures to explain them. The direction of operations, besides, which must be varied with every change of the weather, as well as with many other accidents, requires much more judgment and discretion than that of those which are always the same, or very nearly the same.

Not only the art of the farmer, the general direction of the operations of husbandry, but many inferior branches of country labor, require much more skill and experience than the

greater part of mechanic trades. The man who works upon brass and iron, works with instuments and upon materials of which the temper is always the same, or very nearly the same. But the man who ploughs the ground with a team of horses or oxen works with instruments of which the health, strength, and temper are very different upon different occasions. The condition of the materials which he works upon, too, is as variable as that of the instruments which he works with, and both require to be managed with much judgment and discretion. The common ploughman, though generally regarded as the pattern of stupidity and ignorance, is seldom defective in this judgment and discretion. He is less accustomed, indeed, to social intercourse than the mechanic, who lives in a town. His voice and language are more uncouth, and more difficult to be understood by those who are not used to them. His understanding, however, being accustomed to consider a greater variety of objects, is generally much superior to that of the other, whose whole attention, from morning till night, is commonly occupied in performing one or two very simple operations. *How much the lower ranks of people in the country are really superior to those of the town, is well known to every man whom either business or curiosity has led to converse with both.*

[*Blackwood's Mag.*] ADAM SMITH.

Small Farms.

An estate of sixteen hundred acres in Scotland, divided into eight farms, will employ labor equivalent to that of eighty people all the year round; but, says Mr. Laing, under another system every acre might have its man. For example:

"Take under your eye a space of land in Flanders, that you judge to be about 1600 acres. Walk over it, examine it. Every foot of the land is cultivated, dug with the spade or hoe where horse and plough cannot work, and all is in crop, or in preparation for crop. In our best-farmed districts there are corners and patches in every field lying waste and uncultivated, because the large rent-paying farmers cannot afford labor, superintendence, and manure, for such minute portions of land and gardenlike work as the owner of a small piece of land can bestow on every corner and spot of his own property. Here the whole 1600 must be in garden-farms of five or six acres; and it is evident that in the amount of produce from the land, in the crops of rye, wheat, barley, rape, clover, lucern, and flax for clothing material, which are the usual crops, the 1600 acres, under such garden culture, surpass the 1600 acres under large-farm cultivation, as much as a kitchen-garden surpasses in productiveness a common field. On the 1600 acres here in Flanders or Belgium, instead of the eight farmers with their eighty farm-servants, there will be from 300 to 320 families, or from 1400 to 1600 individuals, each family working its own piece of land; and with some property in cows, sheep, pigs, utensils, and other stock in proportion to their land, and with constant employment and secure subsistence on their own little estates."

Or, again, as to the superior fertility attainable by small holdings. Pay a visit to Flanders, Holstein, the Palatinate, or some of the northern provinces of France, and you will see that, despite the boorish look of the owners and the clumsiness of their implements, crops are produced there which in excellence you will search for in vain on this side the Channel. Speaking of Flanders, Mr. Laing says:

"The clean state of the crops here—not a weed in a mile of country, for they are all hand-weeded out of the land, and applied for fodder or manure—the careful digging of every corner which the plough cannot reach—the headlands and ditch-slopes, down to the water-edge, and even the circle round single trees close up to the stem, being all dug, and under crop of some kind—show that the stock of people, to do all this minute hand-work, must be very much greater than the land employs with us. The rent-paying farmer, on a nineteen years' lease, could not afford eighteen pence of two-shillings a-day of wages for doing such work, because it never could make him any adequate return. But to the owner of the soil it is worth doing such work by his own and his family's labor at odd hours, because it is adding to the perpetual fertility and value of his own property. His piece of land to him is his savings-bank, in which the value of his labor is hoarded up, to be repaid him at a future day, and secured to his family after him."

A more recent, but anonymous writer, whose prepossessions were in favor of the large-farm

system, thus bears testimony to the evidence of the cottar-system in France:

"As the valley of the Seine is reached before the town of Rouen is seen, and as the high lands on both sides of this valley are cultivated up to near the summits, the small patches occupied by the respective crops give a very curious appearance to the country. The division of land is carried to nearly its utmost limit, especially near to towns and villages, and exhibits a desire to cultivate the soil which can scarcely be understood in England, where other objects of pursuit for the enterprising are more open than in France. Still it is due to state that, where the peasantry are to be seen in the fields, whether tending their single cow or laboring the soil, they wear an air of contentment and unwearied industry arguing well for the individual happiness of the population. Fences in such districts are all but unknown. The divisions are marked by stones partly visible.—These are inserted by the authorities, and while pains and penalties await the disturber of such landmarks, public opinion—a still stronger check—brands the man who dares to violate these outlines of property."—*Blackwood's Magazine.*

Washing Day.

To how many housewives is this a day of fatigue not only, but of fretfulness and discomfort, making home any thing but attractive to either husband or children, when with proper care and regulations nearly all of this might be obviated. What is wanted mainly, is a habit of *system.*

Let the day as far as possible be *regular*, and much is generally gained we think by choosing Tuesday for this work. There is still ample time left for the clothes to be dried, ironed and mended, while it gives a *preparation day*, without violating the sanctity of the Sabbath.

The work will be greatly lightened, if the clothes are sorted and most of them put to soak the night previously. If a washing preparation is used, (and amid the great number sold, there are a few which are doubtless an aid to the washer and not injurious to the clothes,) this should be got in readiness on Monday. Many of the little jobs which a family always require done the first of the week can also be done by this arrangement before the washing is undertaken, and if the house and children are neat and tidy, the housewife is better prepared for other duties.

Every thing should be kept in place. The clothes line should be housed till the day it is wanted, and then stretched upon its appropriate frame, which should of course be kept in order; the tubs should not be left standing about, but kept clean and neat in the cellar.—The boiler, clothes bag and clothes pins, etc., should all have been left in place and in order for use the week previous, and much time will thus have been gained.

Do not strive to outdo the neighbors by getting your clothes out the earliest, for this is a a very poor ambition, but do up the morning work as neatly as usual, and have the vegetables prepared for dinner so as to have less interruptions; then you can set about the washing with more of satisfaction than otherwise.—By a little care, the "slopping" which so many seem to think necessary, can be avoided, and the clothes of the washer, as well as the floor, be kept neat and dry. Resolve when you begin, to allow nothing to put you out of temper, and the day will not be one of dread to the household; and by night you will be apt to have as much work done, and as well done, as with any other arrangement, with less fatigue and ill nature.

We give below a recipe for a washing preparation, which we take from the *American Agriculturist.* It is one that has been published extensively, and which we have tested thoroughly, and consider valuable:—*Ohio Cultivator.*

To each pound of common hard soap add from one-half to three-quarters of an ounce of common borax, with one quart of water. Put the water in any convenient vessel upon the stove, add the borax, somewhat pulverized, and then put in the soap cut up in thin pieces.—Keep them hot—but not boiling—for two or three hours, or until the whole is well dissolved, and then set it aside to cool, when a solid mass will be formed. If the vessel is set upon the warm stove at night, the operation will be completed in the morning, though we think it better to stir the mass just before it is cooled.

The night before washing, rub the clothes where most soiled, with the soap, and soak in water till morning. This soap, which has been

more than doubled in quantity, will go quite as far, bulk for bulk, as the original; thus saving at least one half. The boiling and washing are to be performed in the usual manner; but it will be found that the labor of rubbing is diminished three-fourths, while the usual caustic or eating effect of the soap, is greatly lessened; and the hands will retain a peculiarly soft and silky feeling, even after a large washing. The preparation is adapted to all kinds of fabrics, colored or uncolored, including flannels, and is thought to increase their whiteness.

From the Soil of the South.

Profits of Southern Agriculture, and how to increase them.

Messrs. Editors: I am fully aware, that it is a herculean task to undertake to convince planters as a body of men, that the course which our ancestors have pursued for the last half century is not the proper one for us to adopt. And why? Because they could purchase land, for from $1 25 to $2, which would now readily command from $10 to $15 per acre. They could afford, at such prices, to carry out the kill and cripple manner of farming, and pay the Northern merchants too, for all their shoes, hats, blankets, clothing, &c., for their negroes, employed upon their farms. But things have undergone a change. Farming was then the most profitable investment that capitalists could make. But not so now. Lands have advanced five hundred per cent., and negro property over one hundred, and cotton not worth as much. If these things be so, it seems to me, that self-interest should induce planters to pursue a different policy from the one they are now acting upon. But to my remedy for the evil complained of in my last communication. It is simply this. Buy no more Land or Negroes. Take good care of both, and with that be content, so far as both are concerned. Do you ask what shall I do with my money, if I do not "add field to field and servant to servant?" That is the very gist of the whole matter. Now, if I can suggest to you a better investment, than buying more land and negroes, will you do it? that's the question. I would like to know how many planters there are south, who clear seven per cent. upon their capital, invested annually? Let us look into this matter more minutely. And in order for us to do so, I place before you a few figures which I wish you to look at. You will, I trust, bear in mind, that the object we have in view is this. To show by figures that planters do not realize as large a per cent. upon their capital invested as they might in some other investment which we will mention after a while. I now propose to show, first, what each of the Southern States has invested in farms. 2d. In implements. 3d. In live stock, and lastly in slaves. And we will then see if the cotton crop is equal to seven per cent. upon this capital invested in farming.

	FARMS.	IMPLEMENTS.
Alabama,	$64,333,224	$5,125,663
Florida,	6,323,109	658,795
Georgia,	95,753,445	5,894,150
N. Carolina,	67,891,766	3,931,532
S. Carolina,	82,431,684	4,136,354
Miss.,	54,738,927	5,762,927
Louisiana,	75,814,398	11,576,938
Texas,	16,398,747	2,133,831
	$463,675,300	$39,220,190

	STOCK.	SLAVES.
Alabama,	$21,690,112	342,844
Florida,	2,880,058	39,310
Georgia,	25,728,416	381,682
N. Carolina,	17,717,647	288,548
S. Carolina,	15,069,015	384,984
Miss.,	19,403,662	309,878
Louisiana,	11,152,275	244,809
Texas,	10,267,710	58,161
	$123,908,095	2,050,216

RECAPITULATION.

Farms, - -	$463,675,300	
Implements, -	39,220,190	
Value of live stock,	123,908,895	
		$626,804,385
Slaves averaged at $400 each,		820,086,400
		$1,446,890,785

Seven per cent. upon that amount gives us, $101,282,354

Let us now see what the cotton crop is worth:

Alabama made	564,429	bales cotton.
Florida,	45,121	" "
Georgia,	499,091	" "
N. Carolina,	73,845	" "
S. Carolina,	300,901	" "
Mississippi.	484,292	" "
Louisiana,	178,737	" "
Texas,	57,569	" "
Total, - - - - -		2,204,013

These bales at 400 pounds each at 8 cents, high average, makes $70,528,384. We will

just suppose the crop of cotton to be the net income, which we know is allowing too much and then let us see the difference. The interest upon the amount vested in farming is - - - - - $101,282,354
The cotton crop is - - 70,528,384

Which leaves a deficit of - $30,753,970 of paying 7 per cent. upon the farming capital. But perhaps you are anxious to hear what my plan is. Well: it is this—establish factories and manufacture *all the articles* we need upon our farms. But here I am met with this question. "Do you not know that capital invested in such stock does not pay at the South? I frankly confess it does not pay as well as it does at the North. For there, I am informed, by those who ought to know, that it pays from sixteen to thirty per cent. The reason it does not pay so well at the South, is obvious to any one who will think but for a moment. It is for the want of sufficient patronage. The Southern merchants ought to buy all their domestic goods from the Southern factories. But do they do it? I answer no. I was much amused a short time since, upon hearing a gentleman relate the following anecdote: A merchant in one of the middle counties was showing a planter some heavy factory cloth, and said it was superior to any cloth of the kind ever brought South. As usual, "*it was made expressly to order;*" and upon opening the bale of goods, lo and behold, there was the name of the factory at which it was made, and that factory too was located not twenty miles from where the merchant was exhibiting the same for sale. This merchant would not purchase his supply of the manufacturing company at home. But after the company had sent them to New York and sold them there, this merchant was glad to get such fine heavy osnaburgs after paying, not only the freight to N. Y. but to the merchant a profit beside, and then freight back home. Now, why all this expense? Simply because the idea is in the world, that every thing at the North is cheaper than at the South. Now if we did but know how many hundreds and thousands of bunches of cotton yarns, were shipped from the Southern States to the North annually, to be wove into cloth and sent back to us, we would be startled at the amount.

I take this view of it. That if the manufacturers of the North can afford to import so much of their yarns which they use, and then compete with our factories for such cloth, what would they do, if we had capital sufficient vested in manufacturing such goods, as to weave all the yarn spun South? Why they would be driven out of our market. As proof of this position, I am told (I do not know it of my own knowledge) that there is scarcely any hollow ware brought from the North to sell in Columbus; because such ware is made in that vicinity. It is my honest conviction, that if all the planters would for twenty years apply their surplus cash to the establishing of factories, throughout the Southern States, as before stated, to manufacture such goods as we need at the South, that such a state of prosperity we have not witnessed in the last half century, as we would then see. I do not believe this to be hypothetical. I look upon it as a reality.—We are able to teach those *fanatics* at the North a lesson not soon to be forgotten. We have the means to establish those factories, and we have the lands to raise the cotton to supply them. We have the old and young "*darkies*," to labor in them, and we can make the corn, by the blessing of God, and raise the meat to feed them. Why remain "hewers of wood and drawers of water," for the North any longer?—It will pay you a better interest than any capital vested in farming. But don't understand me to wish any one to abandon their farms; no, no!! But we have land and negroes enough. Let us apply the surplus cash only to manufacturing. That will be sufficient. All we want to carry out this measure is this: for some of our wealthy farmers to take hold of it, and we little ones would follow in the wake.—Will Solon, Piker, and you, Messrs. Editors, "give the ball a turn?" I hope so.

ABNER.

THE TOBACCO INTEREST.—Resolutions have been adopted by the Kentucky legislature declaring that it is the duty of the United States, in all future treaties with foreign countries, to see that the great staple of tobacco is placed on an equal footing with the other great agricultural interests of our common country. The Kentucky Senators in Congress are also instructed to urge the subject upon the attention of the general government.

From the Soil of the South.

Sweet Potatoes.

Mr. Editor: From your pen, and your numerous correspondents, I have read with pleasure and benefit a great many valuable articles on all the various branches of Southern agriculture; and for which, I do not know any better returns to offer you, and your correspondents at present, than my little experience on the culture of sweet potatoes.

In the preparation of my potato grounds, I break it up very shallow, and particularly so, if the land is of a poor thin soil, and I make the beds or lists by lapping two furrows together with turn plows, three feet distance. My reasons for breaking up my land shallow and giving but three feet to the row is, to have at the close of the cultivation a small round high ridge or list resting on a firm, unbroken basis, so that the roots of the potato may not grow deep in the ground, but to grow near the surface of the top or sides of the list, so that when the roots begin to grow, the earth may crack open either on the top or sides, thereby giving the roots room to expand. By this mode of culture, I have smooth round potatoes. But when I break up my lands very deep and lay off rows four feet, the roots are mostly long and stringy, or low down in the earth, where they are often cut or bruised with the plow or hoe, at the gathering in of the crop. Very often the best part of my potato crop is planted in June and July, on old pasture or stubble lands. I lay off the rows three feet distance, rake up the grass or stubble with hoes, then double two furrows on it, with turn plows; then plow out the middle with shovels, but I never break the base or bottom of the bed or list. The latter preparation does best, I think, with the draws or cuttings from the vine, the latter I prefer, in bits of eight inches long.

The root of the yam potato does very well planted, if cut into small bits, much like we do the Irish potato. The roots of the potato for planting, should never be taken up or planted in cold, or windy weather, and as fast as they are cut into bits, they should be put into a barrel or pool of water till planted, to insure a good early stand. Draws or cuttings from the vine, should be done likewise.

Respectfully,

ALABAMA.

Glennville, Jan. 1856.

For the Carolina Cultivator.

Gold Region, Mooro Co.
Feb. 23rd 1856.

Messrs Editors.—As the time for sowing cabbage seeds is close at hand and as the fly and other insects frequently provo destructive thereto, I write you these lines, hoping they may thereby be of some benefit to the readers of the Cultivator. As I am in a hurry I must be short. Burn your beds with corn stalks and sow as usual. I have tried it two years, and both times it answered to my entire satisfaction. One of the years the fly was very destructive, so much so that it was difficult for people to get plants to set out their gardens. I saw no sign of the fly about the beds treated as above. Try it thrifty Farmer.

B. T.

Domestic Hints.

Bird's Nest Pie.—Take a deep baking tin, and set as many apples in it as will cover the bottom. Pare them and remove the core from one end; make a custard and fill each apple, as it is placed in the dish. Then make a thick flour batter, pour over the whole, and bake an hour. Serve with sour sauce.—*Ohio Farmer.*

Boiled Pot-Pie.—Take two quarts of apples, pare, core and quarter, then put them into a pot or kettle, and sprinkle on a little sugar, grated nutmeg, and pour in water enough to boil them. Then make a light salaratus crust, and roll one inch thick, of the size of the kettle, and lay it on the apple; boil three-fourths of an hour without cessation. Prepare the sauce in the same way as the bird's-nest pie.—*Ohio Farmer.*

Vegetable Seasoners. — Parsley, celery, thyme, sage, onions, garlic, and other seasoners, should not be put into soups or stews until the soup is nearly done; chop fine, and put in five minutes before the soup is taken from the fire.

Cookies.—One tea-cup of butter, two of sugar, two eggs, four tablespoonsful of sour milk, one teaspoonful of pearlash put into sour milk with spices.—*Ohio Farmer.*

Glue Impervious to Water.—If a coating of glue or size be brushed over with a decoction of one part of powdered gall nuts in twelve of water, reduced to eight parts and strained, it becomes hard, and as solid and impervious to water as a coat of oil paint; in fact, a kind of leather is formed.

Whitewash for Out-houses and Fences.—Take a clean barrel that will hold water. Put into it half a bushel of quicklime, and slack it by pouring over it boiling water, sufficient to cover it four or five inches deep, and stirring it until slaked. When quite slaked, add two pounds of sulphate of zinc, which may be had at any of the druggists, and one of common salt, which in a few days will cause whitewash to harden on the wood work. Add sufficient water to bring it to the consistency of thick whitewash.

To make the above wash of a pleasant cream color, add 3 lbs. yellow ochre.

For fawn color, add 4 lbs. umber, 1 lb. Indian Red, and 1 lb. lampblack.

For grey or stone color, add 4 lbs. raw umber and 2 lbs. lampblack.

The color may be put on with a common whitewash brush, and will be found much more durable than common whitewash.—*Scientific American.*

Valuable Recipe.—Mr. A. Bronson, of Meadville, Pa., says, from fifteen years' experience, he finds that Indian meal poultice, covered over with young hyson tea, softened with hot water, and laid over burns or frozen flesh, as hot as can be borne, will relieve the pain in five minutes. If blisters have not arisen before, they will not after it is put on, and that one poultice is generally sufficient to effect a cure.

A Voice from Virginia.

Cabin Point, Surry Co., Va.

Dr. Seth S. Hance: I was in Baltimore in April, 1854, and from a paper I received of your's was induced to buy a box of your Pills, recommended as a sovereign cure for the Epileptic Fits. At that time one of my servants had been afflicted with fits about twelve years. When reaching home, I commenced with the pills according to directions. I do not think she has had one since. My wife, though, is somewhat induced to believe she may have had one only. Enclosed you will find five dollars, for which you will please forward me two boxes. I suppose you can forward them by mail. Your compliance will oblige me. Yours respectfully,

M. P. SLEDGE.

Dr. Hance's Epileptic Pills are also a sovereign remedy for every modification of nervous diseases. The nervous sufferer, whether tormented by the acute, physical agony of neuralgia, tic doloreux, or ordinary headache, afflicted with vague terrors, weakened by periodical fits, threatened with paralysis, borne down and dispirited by that terrible lassitude which proceeds from a lack of nervous energy, or experiencing any other pain of disability arising from the unnatural condition of the wonderful machinery which connects every member with the source of sensation, motion and thought—derives immediate benefit from the use of those pills, which at once calms, invigorates, and regulates the shattered nervous organization.

Sent to any part of the country by mail, free of postage. Address Seth S. Hance, 108 Baltimore street, Baltimore, Md. Price, one box, $3; two, $5; twelve, $24.

Liver Complaint.—The only remedy ever offered to the public that has never failed to cure, when directions are followed, is M'Lane's Liver Pill. It has been several years before the public, and has been introduced in all sections of the Union. Where it has been used, it has had the most triumphant success, and has actually driven out of use all other medicines. It has been tried under all the different phases of Hepatis, and has been found equally efficacious in all.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Liver Pills, manufactured by Fleming Bros. of Pittsburgh, Pa.** There are other Pills purporting to be the Liver Pills, now before the public. Dr. M'Lane's genuine Liver Pills, also his celebrated Vermifuge, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Worms! Worms!—Various theories have been started relative to the origin of intestinal worms, and yet the question is still a vexed one among medical authorities. Of one fact, however, all are informed, and in which all agree—the fatal nature of the influence they exert on children. At this season of the year, the attacks of worms are most frequent as well as most dangerous. We take great pleasure in directing the attention of parents to the Vermifuge of Dr. M'Lane. It is one of the most extraordinary medicines ever introduced to the public, and has never failed of success when tried.

☞ Purchasers will be careful to ask for **Dr M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa** All other Vermifuges in comparison are worthless Dr. M'Lane's genuine Vermifuge also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Table of Contents.

Beef Hams 8
Domestic Hints, ... 25
Eloquent Extracts 6
Exchanges 18
Experiments with Guano 19
Good Land—and its value 16
Guano 17
How are your Bees this winter? 11
Medical Notices, ... 26
Milk for Children 5
New Books 18
New Music 19
On Pruning Grape Vines 12
Profits of Southern Agriculture, &c., ... 23
Rural Cottage 9
Raspberry—Pruning and Culture 14
Sowing Peas 6
Small Farms 21
Sweet Potatoes, ... 25
The Tobacco interest, ... 24
The new Esculent Root 1
The Apiary 4
The Devon 7
The difficulty of judging between first-rate animals 10
To make lard and tallow candles 11
The fall Pippin 13
To make a hot bed for grapes 15
The farmer 20
Washing Day, ... 22

NURSERYMEN, FRUIT GROWERS AND FARMERS.

THE NEW YORK HORTICULTURAL REVIEW:

A JOURNAL OF SUBURBAN ART.

SUPERBLY AND PROFUSELY ILLUSTRATED.

Devoted to the Advancement of the Rural Interests in America.

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TERMS:—$2 per annum, payable invariably in advance. Fifty cents commission on each subscriber allowed to those who act as agents. $1,000 will be distributed at the end of the year among those who send us the twenty largest lists of subscribers. These premiums will be paid in cash. The first premium will be $500.

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Specimen copies will be forwarded on the receipt of 18 cts. in postage stamps.

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208 Broadway, New York.

March, 1856.

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THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

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February, 1856. tf

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UNQUESTIONABLY the best and most useful Hymn and Tune Book yet published for the use of Lectures, Prayer, and Conference Meetings, Social Worship and Congregational Singing, is

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February, 1856. 2t

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Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete assortment of the most approved Farming and Horticultural Implements, of good quality and at low prices.

For sale by R. L. ALLEN,
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Jan. 1856

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OR,

SELF-RAKING REAPER AND MOWER,

BEST MACHINE IN USE.

1 (the first) used in 1852.
40 used successfully in 1853.
300 in twenty different States in 1854
1200 in all parts of the Union in 1855.
3000 building for the harvest of 1856.

THERE ARE SIX GOOD REASONS FOR this unparalleled increase and great popularity: 1st. It is strong and reliable, and easily managed. 2d. It saves the hard labor of Raking. 3d. It saves at least another hand in binding. 4th. It saves shattering by the careful handling in raking; besides, the straw being laid straight, it is well secured in the sheaf, and does not drop in the after handling, and the heads are not exposed in the stack, so that the GRAIN saving even exceeds the LABOR saving. 5th. It is a good Mower, being one of the best convertible machines in use. 6th. It has a knife that does not choke.

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J. S. WRIGHT & CO.

"Prairie Farmer" Works, Chicago, Dec. 1st, 1855

1—4m.

Newbern Agricultural Warehouse.

WILLIAM H. OLIVER, & CO.,

GENERAL COMMISSION MERCHANTS Newbern, N. C Among our stock of Agricultural Implements may be found Ploughs, embracing some 40 different kinds.

Straw Cutters of all the most approved kinds, varying in price from 5 to 50 dollars a piece; Corn Shellers, from 7 to 60 dollars a piece; among which may be found Readings celebrated Sheller, capable of shelling and fanning at same operation 2000 bushels corn per day. Also, the verticle cylinder, double and single iron and wooden spout shellers.

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Newbern, January 1, 1856.

Strict attention given to the sale of all kinds of country produce.

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RALEIGH, N. C.

The subscriber is general agent for the sale of Agricultural Implements and Farming utensils, Field seeds, Fertilizers, &c. &c. Almost all the articles brought to the late Fair are kept on sale and are offered at manufacturers prices with no cost of transportation, as they were brought free by the Railroad.

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JAMES M. TOWLES.

Raleigh, March 1, 1855. no. 1—tf.

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These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints, Chills and Fever, Dyspepsia, Costiveness, Liver Complaint, Jaundice, Sick Headache, Scrofula, Salt Rheum, Fevers of all kinds, Loss of Appetite, Obstructed and painful Menstruation, and all lingering diseases.*

As a Female Medicine they act like a charm, and when taken according to the directions, they never fail to cure the worst cases of **Piles**, after all other remedies fail.

They purify the blood, equalize the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action; and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

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DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds, Catarrh, Bronchitis, Croup, Whooping Cough, Asthma, Consumption, Nervous Diseases, Dyspepsia, Costiveness, Erysipelas, Disease of the Heart, Inflammation and Pain in the Chest, Back and Side, and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food, in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant, Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups, Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capable of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regular Appetite, and Strengthen the System.**

Price 25 cents per box, containing 25 doses of Medicine.

Call on the Agents who sell the Pills, and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of cures.

Both kinds of the above-named Pills are for sale in

Every Town and Village in North and South Carolina.

And at Williams & Haywood, Raleigh, N. C.

May 1855. 3—

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S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney.*
PETER ADAMS, *Sect. & Treasurer.*
W. H. CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf

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WM. D. HAYWOOD,	WM. D. COOKE,
JOSH G. WILLIAMS,	R. H. BATTLE,
H. W. HUSTEN,	WM. H. JONES,
WM. H. MCKEE,	P. F. PESCUD'
CHARLES B. ROOT,	SEATON GALES.

OFFICERS.

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WILLIAM D. HAYWOOD, *Vice President,*
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R. H. BATTLE, W. W. HOLDEN, CHARLES B. ROOT, } *Executive Committee.*

Communications should be addressed, (post paid) to JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA

MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

DIRECTORS:

J. B. G. Roulhac, Raleigh.
Henry D. Turner, do.
J. R. Williams, do.
T. H. Selby, do.
C. W. D. Hutchings, do.
James F. Jordan, do.
James M. Towles, do.
James E. Hoyt, Washington.
Alex. Mitchell, Newbern.
Joshua G. Wright, Wilmington.
John M. Jones, Edenton.
W. W. Griffin, Elizabeth City,
F. F. Fagan, Plymouth
W. N. H. Smith, Murfreesboro'.
H. B. Williams, Charlotte.
Geo. A Smith, Milton.
O. F. Long, Hillsboro'.
Joseph White, Anson County
Josh. Boner, Salem,
A. T. Summy, Asheville.

OFFICERS OF THE COMPANY.

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H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*
John R. Williams, T. H. Selby, C. W. D. Hutchins, } *Executive Committee.*

This Company has been in successful operation for more than 7 years, and continues to take risks upon all classes of property in the State, (except Steam

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All communications in refereuce to insurance should be addressed to the Secretary, post paid.

J. C. PARTRIDGE, *Sec'y.*

Raleigh, Jan. 9th, 1855.

Warrenton Female Collegiate Institute,

WARRENTON, N. C.

THE 30th session of this school will commence on the 3d of January next, prepared to give thorough instructruction in all the branches of female education. Pupils received at any time. All charges from time of entrance.

Terms per Session:

Board, washing, lights and fuel in rooms,.....$60 00
English tuition,.....12 50
Music on Piano, Guitar, Melodeon, with use of instrument, each.....23 00
Oil Painting,.....15 00

Persons wishing further information, will please apply to GRAVES, WILCOX & CO.

December, 1855.

THE NEW HOTEL,

WELDON, N. C.,

IS NOW OPEN for the reception of visitors. This Hotel is new and newly furnished, and the Proprietors will use every effort to keep a GOOD HOUSE, and render their guests comfortable.

They respectfully solicit a share of public patronage. T. J. JARRATT & Co.

Proprietors.

MEALS always ready on the arrival of the cars.

July, 1855. 33—tf.

AYER'S PILLS,

A new and singularly successful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousness, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but effectual Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the hearses all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characteras to forbid the suspicion of untruth.

Among the many eminent gentlemen who have testified in favor of these Pills, we may mention:

Dr. A. A. Hayes, Analytical Chemist, of Boston, and State Assayer of Massachusetts, whose high professional character is endorsed by the

Hon. Edward Everett, Senator of the U. S.

Robert C. Winthrop, Ex-Speaker of the House of Representatives.

Abbott Lawrence, Minister Plen. to England.

†John B. Fitzpatrick, Cath. Bishop of Boston.

Also, Da. J. R. Chilton, Practical Chemist, of New York City, endorsed by

Hon. W. L. Marcy, Secretary of State.

Wm. B. Astor, the richest man in America.

S. Lelann & Co., Propr's of the Metropolitan Hotel, and others.

Did space permit, we could give many hundred certificates, from all parts where the Pills have been used, but evidence even more convincing than the experience of eminent public men is found in their effects upon trial.

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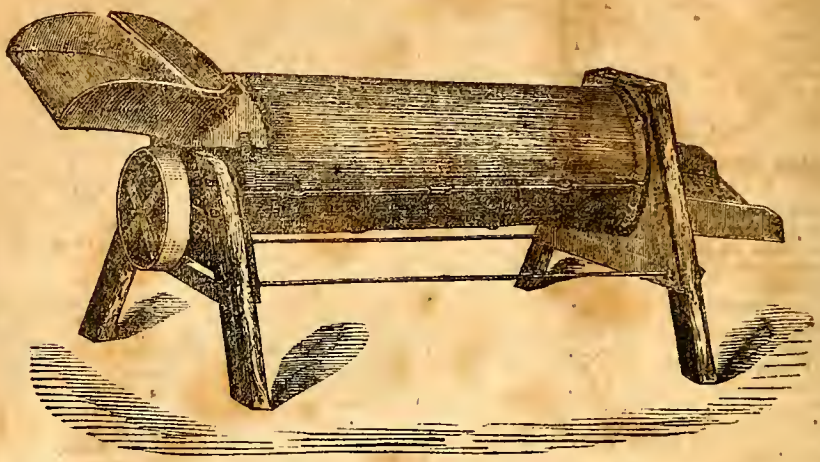

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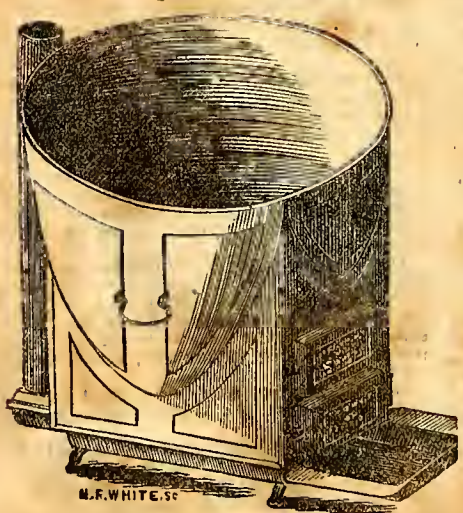

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Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher. B. S. HEDRICK, Agricultural Editor.

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Miscellaneous.

The Value of Manures.

From an address by the Hon. Augustus Drum, delivered before the Indiana County Agricultural Society.

ANIMAL MANURE.

Although the nature and efficiency of mineral and vegetable manures ought to be at this day, partially at least, known to most of our farmers, it is a rare case that you see other descriptions used than the ordinary animal manure, and that too applied with little more regard to the object to be attained than it was a half a century ago. The manure pile lies throughout the whole year by the side of the barn, exposed to every change of weather, reeking out its precious fertilizing properties, with no aid to assist its decomposition, and no attempt to fix or retain in it the powerful volatile essence which gives it value. It is then hurried away to the fields, and spread upon the top of the ground, where it is allowed to lie until the little good it possesses as a fertilizer has left it before it is mixed with the soil, and expected to operate like a charm upon the next harvest. I take it upon me to say that it has little more effect than to deposite so much barren straw, and that it is a mockery of the gladsome earth that so tenderly feeds her children.

Every body knows the value of manures to land, and it is not so necessary that they should know why they are valuable as they should be informed what substances constitute efficient fertilizers and how they should be applied.—The very general use of animal manure, in form at least, proves how extensively beneficial it might become if applied with a proper regard to the qualities it contains. Its essential fertilizing principle is a gas termed ammonia, combined during decomposition, from the nitrogen of the air and the hydrogen of the water, and it is precisely the same element which we undertake to manufacture when we plough down clover and rot it for the purpose of manure, which unhappily is too seldom done. This ac-

tive principle is also exceedingly volatile, and it will readily be seen that the substance that contained it possesses no longer a single quality of fertility. With every pound of it that evaporates it is said a bushel of wheat is lost, and this is the reason why the ordinary method of making and using manure in this country is of so little value compared with what it might become: for, in the first place, before the ammonia is engendered at all, the substance must have passed through its regular-process of decomposition and fermentation. The clover of the manure pile must have perfectly rotted. This process, it is true, will take time, but it may be greatly hastened by the use of other caustic substances, of which I believe quick lime is one, with little trouble and scarcely any expense. Now, how seldom is this trouble taken or this expense incurred!

SHELTER FOR THE MANURE HEAP.

But after the ammonia is at once present and fairly transfused through the heap it is of course vitally important that it should be kept there until the manure is put under the ground. To secure this I have already mentioned how necessary it is that the pile should be carefully sheltered from the summer's sun and the winter's rain. But, in addition to this precaution, chemistry has furnished us with another and cheap expedient in the oil of vitrol or sulphuric acid, which, when diluted with water and occasionally sprinkled on the heap, enables it to retain its valuable essence, and thus imparts the quality so highly beneficial. How much of these things are done by us in the preparation of our most familiar manure?

But even in the article of stable manures our economy is mere wastefulness when constrasted with what it ought to be and with agricultural economy as is practised in other countries. It may be fairly estimated that one-half of the amount of the refuse of the barn or stable, and that by far the most valuable part of it, the liquid manure, is allowed by sheer carelessness to be lost. The application of this would add immense fertility to our acres; and I can conceive of nothing more easily done than so to construct our buildings that this wasteful neglect would be obviated. It is regarded as of so much value in Flanders and Switzerland that they build large tanks and cisterns to receive it, and their buildings are carefully adapted to its preservation. Why should we not do so too? Can any one say?

COMPOST HEAP.

There is another way of preparing a very highly fertilizing manure which no farmer should be without for a day. It is the compost heap. The cost of the structure in which to build the heap would be about one-half the cost of a respectable hog-pen, and every pound of waste vegetable and animal matter about the farm should be gathered together and deposited in the heap. The scrapings of dishes and gardens, the offals of the kitchen, the stalks of vegetables, decayed leaves and wood, all waste straw, even a super-annuated pair of boots; in short, everything that now goes to loss on a farm, should be thrown into the pile, and left to rot and fester until it becomes a fertilizer of the most extraordinary power. It will soon engender all the acids and alkalies that form the essential elements of vegetation.

A distinguished man has said, in reference to the compost heap, that "the careful farmer should allow nothing to run away in the form of a fluid or fly away in the disguise of a smell." In the old agricultural countries of continental Europe a heap of this character is in every man's barn-yard, and I confess that to me it is wonderful that it is not so here. In forming the heap, all that is necessary is to mix a due proportion of soil with the other heterogeneous substances, then add quick lime in the proportion of about one-tenth or about one-fifteenth; but, as some chemists deem lime to be injurious when animal manure is present, it might be as well to use the sulphuric acid or a strong solution of potash.

The heap is once or twice mixed with the spade to make it fit for the field, and as a manure it cannot be surpassed.

Among the most beneficial substances that can be incorporated in such heaps are the bones of animals, hundreds of pounds of which yearly go to loss on a farm. They contain a substance called phosphate of lime, the tendency of which to stimulate vegetable growth cannot be exceeded. But animal bones are also frequently collected by farmers and burnt like lime, in which state it is computed that one hundred pounds of it contains as much of the phosphate as is found upon analysis to be contained in two hundred bushels of wheat.

BONE DUST.

A gentleman who cultivates two or three acres of ground recently told me that this year, by the application of bone dust, he had grown more corn upon two acres than he had been accustomed formerly to raise on his farm. It is, I believe, not generally known that immense exports of it are made from our Eastern cities to England, where they well understand, and act as if they understood, the incalculable importance of these concentrated fertilizers.

Why, some few years ago England was on the point of going to war with Sicily—as she actually did, on a simple pretext, with China—for laying an export duty on the sulphur, which was to be largely obtained from the volcanic regions of Sicily, and which the English converted into sulphuric acid for manufacturing and agricultural purposes.

MARL.

In European countries they go to enormous expense also to obtain marl as a manure, excavating it in France sometimes from pits eighty or ninety feet deep. Now, all this, as the result shows, pays, and pays well; and I have called your attention to the subject of such fertilizers as are most convenient to us, with the earnest hope that we may be all induced to make proper use of the advantages we possess.

LIME AS A MANURE.

I might, if I had the necessary time, speak to much purpose upon the use of lime in its several combinations, as quick-lime and plaster, as a fertilizing substance; for, peculiarly adapted as they are to our soil, and now that we are about to have the means of cheap transportation through a great portion of our country, there will be no excuse for not procuring it and using it in large quantities for manure. It will of course cost money, but let no one be deterred by that circumstance, for we may be well assured that the judicious application of it will more than repay the expense.

Whatever may be the various opinions respecting the use of lime generally, I imagine there can be now little question of its perfect adaptation to stiff, cold, and clayey soils, which need not be dressed with it more than at intervals of four or five years. It is a substance, however subject to rapid chemical changes, and should be spread upon the land very shortly after it has been burnt, and followed at once by the harrow. To obviate such changes, indeed, it is often slacked with salt water and sprinkled by means of a watering-cart upon the land, by which method it is said that ten bushels can be made to do the work of fifty or one hundred bushels used in the ordinary way.—The reason of this is that solution appears to be essential to induce chemical action. But, used even in the manner that is most common among us, I have little doubt of its great benefit—to the soil luxuriant with vegetable life and infested with insects, by decomposing its organic matter and destroying its vermin; to the thin gravelly soil, to be used in far less quantities, by its great capacity in attracting moisture, and by its effect in giving to such earth a much greater consistency; to the cold and clayey soil, by rendering it mellow, warm and friable; and even to the sandy soil, by acting as a powerful solvent, and thus setting free elements in the soil itself which are most nutritious to vegetation.

SHARPENING EDGED TOOLS.—The following is translated from a German scientific journal:

"It has long been known that the simplest method of sharpening a razor is to put it for half an hour in water to which has been added one-twentieth of its weight of muriatic or sulphuric acid, then lightly wipe it off, and after a few hours set it on a hone. The acid, here supplies the place of a whetstone by corroding the whole surface uniformly, so that nothing further but a smooth polish is necessary. The process never injures good blades, while badly hardened ones are frequently improved by it, although the cause of such an improvement remains unexplained.

Of late this process has been applied to many other cutting implements. The workman, at the beginning of his noon-spell, or when he leaves off in the evening, moistens the blades of his tools with water acidified as above, the cost of which is almost nothing. This saves the consumption of time and labor in whetting, which moreover speedily wears out the blades. The mode of sharpening here indicated would be found especially advantageous for sickles and scythes."

Plant the best seed always.

The Cost of Raising Cotton.

Messrs. Editors:—Knowing, from the regular perusal of your paper, that you do not desire to circulate erroneous information, I take the liberty of correcting a very incorrect statement which appeared in your tri-weekly issue of the 28th ultimo, in a communication headed "The Gulf States of our Union and the Valley of the Mississippi." The misstatement, doubtless an unintentional one, occurs in the following paragraph:

"The cost of raising cotton is four cents a pound; one bale of five hundred pounds to the acre is considered a fair crop. A twenty-acre field yielding twenty bales, or ten thousand pounds, at eight cents a pound, only yields a profit of four hundred dollars."

The true state of the case can best be reached by taking the case of an improved plantation of the most available size and with a proper number of slaves upon it, and making the estimates from that basis. This is a most favorable way of making the estimate to exhibit the largest profit; for it is well known to every experienced planter—and how dearly some have purchased their experience!—that the expenses incident to the opening and improving of a plantation for several years after the undertaking is begun, eat up all the profits and often leave a load of the debt behind, sometimes forcing a sale of the whole property, which thus leaves the lands of the original proprietor to fall into those of some wiser man who has eschewed the toil and hazard of opening a new place.

A plantation of sixteed hundred acres, one thousand of which is cleared land, and has the necessary cabins and other buildings necessary for carrying on a place of that size, is worth from forty to sixty dollars per acre, according to locality. Estimating its value at the lowest rate, say $40 per acre, and it makes $64,000. To work this place to advantage—that is, to cultivate seven hundred and fifty in corn, peas, potatoes, etc.,—will require a force of 75 effective hands, which, with young and old, who do not go to the field to work, who would ordinarily be united to the 75 hands, would constitute about 130 or 140 slaves on the place, who, at an average $600 a piece, would be worth about $75,000; 50 mules worth $130 each, would make $6,400 more; 100 head of cattle may be estimated at $700; 12 yoke of oxen at $600; wagons, farming utensils, furniture, blacksmith and carpenter's tools, and all the other necessaries, including gin-stands, mill, etc., may be estimated (and it is an under estimate) at $2,000; so that any one, by simply adding these different amounts, will see that the entire value of such a place as I have supposed will be about $150,000; and this upon the supposition that the place is worked without a steam-engine to gin the cotton with.

Such a place, with favorable seasons, will make ten bales to the hand, or about one bale to the acre, and sometimes when everything is prosperous, an early spring and a late dry fall, as many as twelve bales to the hand, and in some very extraordinary instances even as high as fifteen bales have been gathered. But on an average of ten seasons every experienced planter will agree that eight bales to the hand is an outside estimate, making a crop of about six hundred bales; and taking 8 cents as the average price per pound, which for swamp cotton is again a full estimate, and the gross income for a single bale of 400 pounds, which is the well known uniform weight, will be $32, and the whole crop $19,000, exclusive of the cost of shipping, and soiling the crop, which amounts to at least $2,50 per bale in every case, and where the place is distant from market nearer twice that; leaving say a net income of about $18,000. From this must now be deducted the cost of cultivating the place, overseer's wages, feeding, clothing, and, doctoring the negroes, supplying wear and tear of tools, and losses of mules and stock, altogether, on a place of the size I have named, not falling short of $6,000, many planters estimating their expense at $100 to the hand, which would make $7,500. Taking it at the former sum and we have the net profits of such a place as I have described amount to $12,000, being just about an interest of 8 per cent. on the value of the capital invested.

This, Messrs. Editors, I believe a fair statement of the profits of the cotton planter; and you can now see how it comports with the fancy sketch of your correspondent. If I have exaggerated at all it has been in giving too favorable an aspect to the side of A Planter.

Vicksburgh, July 1855. [*Nat. Intelligencer.*

Trimming Trees.—Large limbs should be cut off in August; this is a better time than June

Blood Stock.

It seems impossible to make some people understand what is meant by the expression, "Blood Stock." They will twist, and turn, and laugh at the idea that any farmer, by judicious selections, has reared a herd of cattle that inherits the principal traits of the animals selected to begin with.

They laugh at the idea of keeping the very best for breeders—and will tell you how a chance animal of their own has excelled the herds denominated "blood stock."

And yet when you ask what reliance they can have on the progeny of chance animals, they will tell you that they have bred from the same for sixty years in succession, and therefore they are confident of success in rearing their calves.

Now this is precisely the doctrine of the advocates of "blood stock." They breed from the best, and cast off the inferior animals. They want no crosses with inferior animals, and are confident that by pursuing this course, they are on the *right* road to perfection, however long that road may prove.

Still there is another class of farmers who profess to think that the most promiscuous intercourse between the males and females of cattle, will tend to produce better dairy cows and better working oxen, than can be produced by any kind of selection.

These farmers inquire what is meant by "blood stock." They would prefer to buy from the most promiscuous herds of cattle because they occasionally find an extraordinary cow that yields more than the average of blood stock. If one in fifty is found to excel the average of select stock, they seem to think they have proved their case, and are ready for judgment.

But what progress do such people make in farming? The same which a gambler makes to get a fortune. He runs for luck, and makes but little calculation, except upon the want of information of those who may be induced to play with him.—*Ploughman.*

Indian Loaf.—Two quarts of fine corn meal scalded dry, one tablespoonful salt, one and a half pints of flour, one pint of molasses, one of butter-milk, teaspoonful saleratus; mix well, and bake three hours slowly, in an iron basin.

From the New England Farmer.

Potatoes for Planting.

Mr. Editor:—I am an advocate for small potatoes for planting purposes. Not but that large ones are not as good, and perhaps better; yet on the whole, I am in favor of small potatoes. The argument, that small potatoes will produce small potatoes is not supported by facts. It appears to me that the application which writers on the other side of the question make of the axiom, "Like produces like," is sophistical, that it does not touch the question under consideration. Potatoes will produce potatoes, corn, corn, &c.; but it does not follow that a small potato will produce small potatoes. I am rather inclined to believe that the advocates for large potatoes for seed, are rather apt to try small culture as well as small potatoes, when they make experiments that way. Permit me to give my experience in relation to small potatoes as seed potatoes.

I am a mechanic, and cultivate only a small garden; it is, therefore, for my interest to produce as much as I can on a small space; my garden consisted of ten square roads in 1853–4, and this year there were two rods more added. Of this, I have planted some two-thirds in potatoes. In 1853, I planted with a mixture of large and small potatoes, and in October dug nearly six bushels, large and small, besides what my family used through the summer; from those I took all the small ones for the next year's planting; there were none larger than a good-sized plum, and many were smaller. In 1854 I planted these potatoes, and dug in the fall eight bushels of good-sized potatoes, besides the small and what were used in my family before digging time. This year I planted the small of last year's raising, having finished digging, I find, besides what were used before digging, that I have 115 bushels in all, which makes about 250 bushels per acre. I think, considering the effects of the drought in this region, this gives a good result in favor of small potatoes. The manure which I used was ashes mixed with night-soil and the collection of sink-drain. Yours, &c.,

H.

East Bridgewater, Oct. 22.

Cough Medicine for a Horse.—A good blanket, and leggins, to match.

From the New England Farmer.

Green Corn for Soiling.

In the October number of the *Farmer*, I find that the milk-producing qualities of green corn have been called in question, by one at least, who seems to have had opportunity of testing their value for such a purpose, and that you, Mr. Editor, like the "rest of mankind," are quite confident in your opinion respecting the utility of raising and feeding it for the purpose above mentioned. Your opinion, so far as my knowledge extends, coincides with that of nearly all who have written upon the subject. Our agricultural papers, our patent office reports, together with the oral testimony of many excellent practical farmers, furnish a mass of evidence in favor of using green corn for milch cows, to which individual experience, of an opposite character, can oppose but little weight or influence. And yet I must say, that, so far as my own experience goes, I have found this kind of feed to fall far short of the expectation which its numerous commendations would strictly justify, and have sometimes been inclined to regard it, for producing milk, as almost worthless, and even injurious. That it contains some nutriment, and that cattle may subsist better with, than without it, along with a moderate supply of other food, or that it is better, under certain circumstances, than nothing, I do not doubt; but for working cattle, horses, or milch cows, when given in a crude state, I do think it a very poor substitute for good hay or grass. So far as appearances go, very few kinds of food would seem better adapted to produce an abundant flow of milk than this, and such I have expected, in accordance with opinions so generally and confidently expressed, would be the result in my own practice; a result which I have never yet reached, with several years of experience.

An acquaintance of mine, and a careful observer of the habits of cattle, once told me that green stalks should never be fed to cows in the morning, previously to going to pasture, as they would so far injure the animals' appetite for grass, that instead of feeding as they otherwise would, on more nutritious food, they would go and lie much of the day in the shade.

Whether it does satisfy the appetite, without yielding corresponding support, I cannot say, but am inclined to that belief. In its various stages of growth, from that of the tender plant, to the fully grown stalk, green corn—other things being equal, contains, according to analytical experiment, from eighty-four to ninety-four per cent. of water. It contains as great a per centage of water when nearly full grown, as at any other time; and of course as little solid or nutritous matter as at any other time, unless the saccharine juice with which it is charged possesses that quality, which is quite improbable. Were this juice extracted and fed to the animal alone, it would, doubtless, pine away and die. Nor can it be expected that the small amount of solid, say six to ten per cent. that is consumed along with it, will of itself be sufficient to counteract the deleterious effects of so large a share of juice, and at the same time, keep the animal in a healthy and thriving condition.

At the commencement of feeding stalks, cows will not generally eat much of them, unless they are partly cured, which they contain is not, at the time, highly relished by them.

Three years ago I fed seven cows quite liberally, for a month or more, on green stalks. My custom was to feed in the morning, as it was the only convenient time of doing it, and to scatter the stalks over a portion of an adjoining pasture on which they had not of late been fed, so as to give them as clean a place for eating as possible, taking care to give them much more than they would immediately consume, which they would generally finish off in the course of the day. I could not perceive that the stalks made much if any difference in the quantity of milk produced, but the cows continued to give less and less, about as the grass failed them, although they continued to consume a proportionably larger amount of stalks. I have this fall made another trial of this kind of feed, and with results less flattering than before. For several weeks I could not conveniently furnish my cows with any but the poorest pasturage, but attempted to make up this deficiency by feeding them what stalks they would eat at night and morning.

But they did not thrive or even hold their own on this kind of keeping, but began to appear gaunt, were dissatisfied with their condition, which they manifested by being cross and ill-natured towards each other, and by a disposition to roam abroad, whenever an opportunity was presented, in quest of something

more satisfying. And worse than all, some five or six of the seven cows then treated, commenced withholding their milk entirely for half the time or more, so that I feard that all, anew milch cow included, would become entirely dry before I could give them a change of feed. Finally I began to practice reform; gave them yellow pumpkins, carrots, cabbages and good rowen feed; but they have not yet, after the lapse of a month, recovered from the effects of *dieting* on green corn! I once kept a horse for a few days on the same kind of food, with the ordinary supply of grain, but as it seemed not to be doing well, I soon discontinued it The horse drank but very little water during the time it was thus kept, refusing it, some days, entirely.

If the cows were, in like manner, affected by the stalks, as is highly probable, that may account, in part, for their drying. I have, in a few instances, fed ears of corn with the stalks as they were cultivated for a field crop, so as to produce an increase of milk. I would advise those who may have stalks to feed, whether green or dry, not to feed them entirely alone, but with other kinds of feed. Some years since, I fed a yoke of oxen entirely on stalks nearly, or quite through the winter. They *appeared* to be doing well during all this time. They were playful and lively, and their hair was bright, but when put to doing the spring work of the farm, they were grea ly deficient in strength and durability.

Thus I have given you, briefly, my experience in part, hoping that a further and more careful examination of the subject, by practical men, may lead to more reliable and satisfactory results. It is very important that something of abundant and rapid growth should be available as a substitute for the ordinary supply of feed in case of drought, but I apprehend that those who may depend almost entirely on green corn for such a purpose, are destined to meet with disappointment. C. Blakely.

Bristol, Ct.

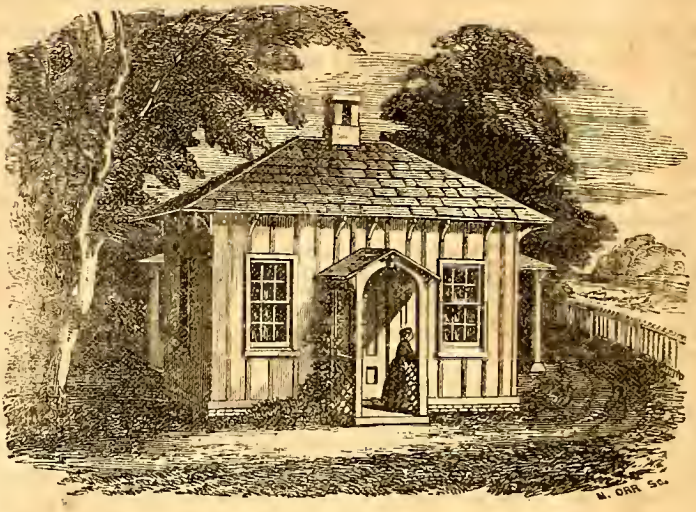
The Roller and its Advantages.

There is no agricultural implement so seldom met with in this country, perhaps, as the *roller*, and yet it is one of the most useful of utensils. Where your ground is soft and loamy, if you have not time to pick up the stones upon it, you can roll them in, and produce, at little expense a smooth and clean surface, rendering your fields free from hummocks, and fitting them for plowing and mowing. And it has been mentioned by some that the roller is a useful implement upon ground in which the frost has heaved out the grass and clover roots. It may possess an advantage in this respect, and no doubt would be a fine thing to level and press down damp land where clover is sown and would be likely to heave.

The roller which I would recommend for general use, and one which we have used with great advantage, is made with two separate rollers, each one being four or four and a half feet in length, with strong iron bands around their ends to prevent splitting, and a good wooden or iron shaft running directly through them, to which it attached a frame work, &c. The rollers can be made out of large hollow elm logs, or of seperate pieces put together. A good, streight, hollow log, is however, preferable, particularly if the outside of it is sound. You can work it down to your liking, and put some strong cross arms in the ends of the roller, through the center of which the roller should run. Some farmers, I believe use iron rollers, but probably on the whole wooden ones are better, if they can be made large without incurring much expense.

The roller is an admirable implement to pass over barley ground after harrowing it, or even after you have drilled in the barley; for when the grain ripens, if you do not care to cradle it, or even if you do, you possess the advantage of cutting it low to the ground, and in this way secure a greater amount of straw, not to mention the clean surface which close mow ing makes, thus leaving your barley lot in the finest condition to plow. We invariably roll our barley ground; we think it pays in three or four ways; first, the small stones are rolled into the ground out of the way, so that they will not dull scythes, second, you can rake up your barley with a horse-rake, and not run the risk of collecting stones in the winrows to be ultimately threshed; third, you create a smooth surface, either for plowing or mowing; and fourth, you get more straw, and make your work look better where the field is rolled than where it is not.

I therefore recommend double rollers. Roll down your grass and barley and wheat lands; save money and labor in picking up stones; and in a word, make your lots appear smooth and handsome by using an implement which is both cheap and simple.—*Plough Loom Anvil.*



Rural Cottage.

This cottage is a grade beyond the one described in our last number, both in appearance and accommodation. It is 20 by 16 feet on the ground, with a rear wing 26 by 8 feet in area. The main body is 10 feet high, to the roof, vertically boarded and battened. A snug, half-open (or it may be closed, as convenience may require,) porch shelters the front door, 5 by 4 feet in area. The cottage has a square or hipped roof, of a 30 deg. pitch from a horizontal line, which spreads full two feet over the walls, and bracketed beneath. The rear wing retreats two feet from the wall line of the main building, and has also a hipped roof of the same pitch as the main one, with eight feet posts. The open end of the wing advances six feet toward the front of the main part for wood-house and storage. The construction of this is in the same style as the one described in our last. The windows are plain, two-sashed, of six lights each, 8 by 12 glass in front, and 8 by 10 in the rear.

PLAN.

INTERIOR ARRANGEMENT.

The front door opens into a common living room, 16 by 12 feet, with two windows, in which is a stove-chimney running up from the main floor next the partition, or placed over it in the chamber, and running up through the center of the roof. On one side of the living room is a bedroom, 10 by 8 feet, with two windows. Next to this bedroom is a large closet, 8 by 6 feet, with one window, and shelves, and tight cupboard within. These rooms are 9 feet high, and over them is a chamber, or garret, 20 by 16 feet, entered by a swing step ladder, as described in our last. This garret is lighted by a small dormer window in the rear roof, over the shed or lean-to. A bed may be located in this chamber, or it may serve as a storage and lumber-room.

The wing contains a small kitchen, in case the living room be not occupied for that purpose, 10 by 8 feet, lighted by a side-window, and having a small chimney in the rear wall. It may contain, also, a small closet, three feet square. A door passes from this small kitchen into the wood-house, which is 16 by 8 feet, or with its advance L, 14 feet, in the extreme outer corner of which is a water-closet, 5 by 3

feet; thus, altogether, giving accommodation to a family of five or six persons.

The construction of this cottage is shown as of wood. Other material, either brick or stone, may be used, as most convenient, at a not much increased cost. The expense of this building may be, say fifty per cent. higher than the one described in our last, according to the finish, and may be sufficiently well done and painted complete for $300; which may be reduced or increased, according to the style of finish and taste of the builder.

A cellar may be made under this cottage, which can be reached by a trap-door from the living room, opening to a flight of steps below. —*Allen's Rural Architecture.*

Curb or Check Rein on Horses.

The Editor of the Ohio Cultivator is a close observer of horse tactics, and claims to be something of a horse himself; consequently is able to speak (perhaps from experience) of the absurdities and cruelties practised on colts, their dams and sires. The following remarks show that his heart or sympathies lean in the right direction, and we recommend the following article to our readers:

"We have a serious intention of erecting ourselves into a permanent institution for the relief of distressed animals. In a late number we glanced briefly at the unhorsemanlike practiae of sitting upon horseback while the horse was at rest. We come now to a more prevalent evil practice, in the abuse of the curb and check rein. In the Cultivator for 1854, p. 291, is an article on this subject from an English paper, which ought to be repeated, or something like it every year.

"As we go upon our daily beat from the cottage on third street, to the Cultivator office, our sense of *horsemanity* is almost daily outraged by what we see at the rails and posts along the curb-stone. Country people come in with their generally well kept horses, and hitch them up while they do their shopping or other errands, which sometimes takes half a day or more. Now, these people have not the slightest intention to abuse their horses; on the contrary, many of them would fight for their steeds as soon as they would for their wives or children; but this is the way they do it: Most of those who come on horseback ride a Spanish saddle with high pommel, and with a short bridle rein. They dismount, and to keep the bridle rein from getting over the horse's head, they hitch it back over the pommel, by which it is drawn tight, and the horse's head slightly curbed. If the horse was in motion, this slight curb would cause very little uneasiness, but while all the muscles are at rest, this tension soon becomes exceedingly painful, especially as many of these country horses are not at any other time subjected to the curb. The horse bears it very well for a little while, but soon begins to step out and champ the bit, and if it had the gift once vouchsafed to Balaam's ass, would reprove its owner with all the modern improvements of the language. But as the poor brute has no such faculty, and as the rider is the ass in this case, it must grin and bear it; unless, indeed, the Editor of the Cultivator happens along, and quietly putting a finger under the rein fillips it off the horn, and goes on as innocently as if nothing had happened, while the relieved animal holds out his grateful nose and says, "thank you, old fellow!" in a kind of horse latin, that is perfectly intelligible to the editor aforesaid.

"One day last fall we were sitting in the store door of our friend Nelson, of Urbana; it was the day of the County Fair, and as Nelson's store is right fornenst the public square, the rural equestrians came in and soon filled the rails with their saddle nags. The riders as usual hitched up the bridle rein over the horn of the saddle, and went to see the sights. We noticed one colt, a spirited iron gray, trussed up in this way, which soon began to show signs of intense torture. Our finger began to itch to get hold of that curb; the colt riled at the rail, and we hitched about as uneasily in our seat, and finally as we were about going to the rescue, after saying to Nelson that a man deserved te be —— who would truss up a horse in that way, the gray luckily slipped the rein off the pommel, and out went his nose, the gladdest colt on the public square; and we were about to take off our hat and give three cheers, when we bethought it might compromise the dignity of the Cultivator, so we only clapped our hands, and gave three cheers inwardly.

"But this is only one phase in the abuse of the check rein. Farmers are not the only sinners in this respect; in fact, they are least guilty and it is because their horses are so seldom

subjected to check, that they suffer most intensely when it is imposed. Our town and city folks have most to answer for. Here we see even the cart-boys, with a ton of sand in their cart, and the poor horse—which is generally a cast-off omnibus or livery horse—checked up most unmercifully, because the ragged driver takes as much pride in having his team *look well*, as his more aristocratic predecessor; and at every jar of the cart, or misstep of the poor damaged brute that hauls it, the latter gets the full benefit of the jolt upon his jaws, which are by this time providentially pretty well hardened.

"The evil begins much farther back. The colt in the barn-yard, that has never known restraint until now he is some three years old, is roughly caught, and a bit forced in his mouth, a crupper put over his tail, and a belt around his body, and then his nose drawn in half way to his breast, when he is left to suffer and sulk, sometimes for half a day. When this editor was a lad, he was guilty of just such enormities, but these are among the original sins of which he has most heartily repented. In breaking a colt to bit, the rein should never be drawn so as to cause positive pain in the muscles of the neck; for besides the inhumanity and uselessness of such a course, the horse's mouth is irretrievably damaged by it for all future use; a good mouth is indispensable for a good saddle horse.

"When the horse goes into harness, again comes the abominable curb, to make him hold up his head. As before remarked, in a little horse, with all his muscles in action, a moderate curb is not very painful, and is often useful after long habit, in steadying his carriage; it is like every other bad habit in this respect. But to hitch up the team to a post, leaving the curbs tightly drawn, is an unmitigated abuse. Every day we see fine carriage teams standing in that way, left by the hour. The noble beast first puts out his fore feet, then gathers again, turns his neck quite to one side, then to the other side, to relieve the aching muscles, and all because the thoughtless driver had neglected to take the check reins out of the hooks, or for fear his team would get their heads down On Sundays our devotions are often very much disturbed by such sights. Fine carriage teams are trussed up for two hours at the church doors, sometimes hot and in fly time; they can only twitch their skin and wag a stump of a tail; sometimes in winter, with the keen wind singing in their ears, and their forefeet in the frozen slush of the gutter. In such cases, if it were not Sunday, and if it were not for disturbing better worshippers, we would like to throw a torpedo into the pew of the owner, who ought to be made to sit astride of a sharp rail without any cushion on it, all the time his team was hitched up that way."

Remedy for Indigestion.—A friend has handed to us for publication, the annexed remedy for indigestion, a complaint which is so generally prevalent in this country. It was communicated to him by a gentleman in Great Britain, who says in his letter on the subject:

"Having suffered much from indigestion, I send you the remedy to relieve you. It arises by rejecting too large a portion of the phosphates of lime and magnesia contained in the bran in our bread; being quite sure that our all-wise Creator, in giving us wheat for our food to support our frames, placed in it every necessary constituent for the health of them.—When, therefore, you derive benefit from it, please to make it known to our brethren in America."

Boil half a pint of white wheat bread three hours in a quart of water, or a little more, if necessary. Drink half a pint of the liquid twice or thrice in a week, and the effect will soon be perceived.—*Goward's Real Estate Register.*

How to Burn Coal.—The great mistake of all is to put on too much coal, as if it were wood—the greater the heat. If too much coal is applied, the combustion is necessarily "choked up," the draught destroyed, and the elements of the coal slowly escaping from it to pass off to the chimney unconsumed, or are disseminated in gases through the room. Whereas, if the strata of coal be but moderate, a red flame will play around the interior of the stove, by which entire combustion and a healthy heat are secured. One ton of coal, therefore, by thorough combustion, will often secure more heat and a healthier atmosphere, than two tons secured in the ordinary way; and this is a fact which can easily be demonstrated. It will be very important, this winter especially, to have attention paid to this rule.—*Graham's Mag.*

Canary Birds.

This is the month for pairing these little songsters, unless the weather be extremely cold—that is, the males and females should be put into their breeding cages during the latter part of February, and they will generally mate, and make their nests by the first of April, and sometimes much sooner. We have kept and raised Canary birds for many years, merely for the pleasure of seeing them, and of hearing their merry songs. On one occasion we had about one hundred all in a room, with their nests arranged around agalnst the walls. We profess to be well "posted" in the *science* of managing these pets, and we shall furnish as much information on this subject, as we shall think profitable to our readers generally.

In the small books published on the management of Canary birds many useless whims are laid down as rules for feeding, pairing, &c. We will now proceed to state in brief a few points of interest in their management at this particular season.

Food.—Canary and hemp seed are the two staple articles to be used. One part hemp to four parts of Canary seed, to which may be added a little millet seed if convenient. Cabbage is excellent as green food at all seasons. Oats are also very good, and when the birds are placed in a room, they will thrive on oats and cabbage alone. We have kept them through the winter in excellent condition on no other food. When confined in small cages, they cannot be fed on oats and cabbage to advantage.

Pairing.—In pairing birds for breeding, let them be placed at once in the cage designed for their use, with a nest box in position, and with a tuft of deer's hair, or cow's hair well cleaned, and tied to the wires of the cage when the time arrives for nest-making. The nest may be partially made by the fancier, a plan that we always adopt. No different food is required from their regular supply. When mated, the male will be seen to feed the female. If a little fighting take place on being introduced to each other, and if continued for a week or two it is no evidence of not properly pairing in due time. Either gravel, or old mortar should be placed in the cage at all times, and especially during the breeding season. When the female is ready to lay, she generally sits on her nest the night previous to laying her first egg, and the eggs are laid in the morning before eight o'clock. The two first eggs should be removed as soon as laid. Take a cup filled with sand, seed, or meal into which place the eggs with care by taking them by the ends with the thumb and finger. On the third morning, after the bird has laid, place the removed eggs in the nest again, and the bird will now commence sitting, and all the eggs will hatch at, or near the same time; but if the eggs be not removed, they will hatch in the same order daily as they were laid, and when the last bird breaks its shell the older ones will be so large that it will be liable to be smothered by them. The Canary bird commences sitting with the *first* egg, and the consequence is that where no eggs are removed, a part are beginning to develope the embryo birds, when the last of the litter is laid. It has been recommended to put a mock egg in the place of the one removed, but this is wholly unnecessary, as we have removed, them in some hundreds

of instances and we never knew a bird to desert her nest in consequence nor to retard the laying of her regular litter of eggs. If one or two are laid after the third day, we let them take their chances with the rest. The eggs hatch on the thirteenth day.

Food for the Young.—Our manner of feeding is to prepare in advance a quantity of soda crackers by pounding them in a mortar quite fine; say enough to last a week or two at a time. We then take hard boiled eggs, and mix one egg with double its bulk of cracker, by rolling in a bowl between the hands, and when thoroughly incorporated it is ready for use. Fresh food should be put in the cages three times a day, removing in the morning all the leavings of the day previous. This food should be given to the birds as soon as they commence laying. A supply of seed should also be given to them. There is no better food in existence than the above. It is highly nutricious, yet not so solid as to be injurious, and if young birds do not thrive on it, the cause will rest with the mother in not feeding them sufficiently. As soon as the birds are able to leave the nest, another nest box should be furnished, with the nest partially made, as before stated, as the mother will commence laying again, frequently while her young remain in the nest. The young should not be removed till they have learned to feed themselves which will be in about three weeks after leaving the nest.

Of all the animate creation that we have had around us, the Canary bird has been found to be the least subject to disease, and the least trouble to provide for, seldom, if ever loosing a bird by disease when mature, except in breeding season, when the females are subject to fatal diseases like fowls in being "egg bound," &c.—*Northern Farmer.*

On Milking.

But few persons who are entrusted with the business of milking, understand its philosophy, and the proper method of its operation. Farmers are desirous of procuring the best breed of cows for milk, they try to supply suitable food and stabling, (at least some do) and then they reasonably expect a proportionate return for all their care and expense, when frequently they overlook one of the most important means of success. They are perhaps aware that the bag or udder of the cow is lined with a sort of honeycomb, or pear shaped vessels, that these are filled with milk, and must be upset by mechanical force and emptied into the teat of the cow; that the cream, or oily part, rises as naturally to the upper surface on the milk in the udder, as it does upon the milk when set away in a pan or dish, that the last part of the milking is always the richest in cream, that when the cow is not milked dry, rapidly, and with active muscular exertion of the hand, the contents of the udder are re-absorbed into the lacteal vessels, forming a curd, and obstructing the secretion of milk. All this may be well understood by the farmer or dairyman, but how seldom do they inform their milkers about it, or see that such needful philosophy is practically obeyed.

Some twenty-five years ago, the writer well remembers about the discovery of a new method of milking. A boy who was probably endowed with more *laziness* than *sense*, found that by inserting a quill or straw into each teat of the cow, the milk would run out without any tax upon his own exertions. When questioned by his employers as to the reason of his unusual quickness in milking, he reluctently told them of his discovery. The invention caused almost as much excitement in the neighborhood as the discovery of the cow pox, and it soon got into some of the papers. The boy was extolled by some, as a benefactor of the age,—the hero of the milk-pail. One newspaper prophesied that silver milking-tubes would be manufactured by the quantity, and come into universal use as one of the indispensable implements of that age of astonishing improvements; when lo! in a few weeks the public joy was suddenly dashed to the ground like the maid's pail of milk, by the announced caution that all of the aforesaid lazily milked cows were mysteriously *drying up*.

The fact was obvious that nature's requirements had been unheeded—that a *shiftless boy* and a *hungry calf*, drew the milk in a totally different manner,—that while the brains of the one were lulled into easy contemplation over the milk-pail, the brains of the other were beating a vigorous *reveille* against the cow's udder, compelling nature to be generous and bountiful.—There are indeed comparatively few persons who understand how to milk a cow as it should be done, and I once heard a celebrated agricultural editor at the South remark, that he never saw there, but one person who could be called

a good milker, and to judge by what I have seen there, as to the quantity they commonly obtain from their cows, I should agree with his opinion, as I would give more for the yearly yield from one of our native cows when properly milked, than for that of the best imported blood stock, when milked in the too common listless way. A naturally good cow can soon be ruined, as to her milking qualities, by careless indifferent milkers, and particularly when aided by scanty and poor food and shelter.

R. H. P.

Windsor, Feb. 23d, 1856.

Horticultural.

Raising Strawberries.

PLAIN, PRACTICAL INSTRUCTIONS TO BEGINNERS.

[The following correspondence explains itself. We should perhaps add, that Mr. Pardee is the author of "The Strawberry Manual"—the only American work upon the subject. Messrs. C. M. Saxton & Co. of this city, have just issued the third edition, which has been thoroughly revised and enlarged. This book contains full information upon the growth and culture of strawberries, and should be in the hands of those devoting any attention to the culture of this delicious fruit. Price 50 cents.]

OFFICE OF AMERICAN AGRICULTURIST,
February 15, 1856.

R. G. PARDEE, ESQ.:

Dear Sir—A subscriber (who is doubtless a fair representative of many others) says he was born in this city, and has always been in business and resided here until last fall, when he went into the country and purchased a house and one-fourth of an acre of land, which he wishes to use to the best advantage. One of the first things he intends to cultivate is a plot of strawberries; but he is entirely ignorant of the method of procedure. He has looked into books, but they confuse him somewhat. I will put his queries into regular order:

1. What is meant by pistillate and what by staminate strawberries?

2. What are the names of some of each kind?

3. Should these be planted together; and if so, what proportion of each?

4. What are the best kinds for him to select for a bed of about twenty feet square, and how many of each?

5. Where can he get the plants, and at about what cost?

6. Can he do any thing towards setting them this spring; and if so, when shall he commence?

7. His soil is an ordinary one, in Fordham, N. Y., which has consequently received no manure. Indeed three or four inches of the surface is covered with the cellar diggings. What is the simplest method of preparing it for setting the plants, and WHEN should it be done?

8. How shall the plants be set out? how far apart, &c.? Please direct a perfect novice in the matter.

9. What after cultivation is required in early summer, in mid-summer, in autumn, and what care in winter?

By giving a few plain answers to the above questions, such as a "green hand," as he calls himself, can understand and practice upon, you will not only greatly assist him but also a multitude of others in like circumstances, and confer a favor upon your friend, O. J.

REPLY.

To the Editor of the American Agriculturist:

Dear Sir—Your note of the 15th is at hand. I receive by letter many inquiries similar to those of your Fordham subscriber, and cheerfully avail myself of the medium of your paper to answer them. I will reply to the questions in their order.

1 and 2. Pistillate (or female) strawberries are so called from the pistillate blossoms, which appear on such varieties as Hovey's Seedling, Burr's New Pine, Crimson Cone, &c. The center of the flower has a smooth surface of closely packed pistills, almost as smooth as

velvet. The staminate (or male) plants have a dozen or more stamens, or little shoots, extending upward a sixteenth of an inch or so above the mossy bed of the pistils, with distinct anthers (or little balls) upon the upper point. These are so easily discernible to the naked eye, as to be readily perceived by the most casual observer. The Large Early Scarlet, or Iowa, and Boston Pine, are good specimens of the staminate varieties. The pistillates are the greatest bearers.

3. They should always be planted and kept separate: otherwise the rampant staminates—as Mr. Longworth calls them—will soon drive all the bearing pistillates from the bed. A bed of staminates of about one-tenth the size should be placed within ten to thirty or at most fifty feet of the pistillates, to impregnate them. The pistillate or female plants will not fruit well if there are no staminate or male plants near enough to have the pollen from the anthers of the latter carried to the flowers of the former, by the air or upon the bodies of bees or other insects.

4. Hovey's Seedlings, Burr's New Pine, Crimson Cone, and Early Scarlet or Iowa, are an excellent selection of strawberries. Set on the bed of twenty feet square four rows of Hovey's Seedlings (pistillate or female plants), two feet apart, with the plants twelve inches from each other in the rows. This will require 80 plants. Then the same quantity of Burr's New Pine (also pistillates) in the next four rows, three feet from Hovey's. Three feet farther on, put one row of Large Early Scarlet or Iowa (staminate or male plants), and let boards six inches wide be set up edgewise between each variety to prevent their becoming mixed.

5. A good nurseryman can scarcely be found who will not supply, of those kinds, the 200 plants required, at $1.50 per 100.

6. The spring is an excellent time to set them. As soon as the frost is out of the ground, throw it up into ridges, and as soon as we have settled weather and the soil in good order to work, spade it deeply and *pulverize* very finely and evenly, leaving it level; then set the plants.

7. A good application of leaf mold (rotten leaves with the surface soil from the woods), bog or muck earth, if the latter has been exposed to the air and frosts for six months or more, will be excellent. If the above can not be had, then apply good loam or turf, with two quarts of salt, one peck of lime and one bushel of wood ashes, to a bed of 20 feet square. If other manure is used, let it be hog, cow or hen droppings, in moderate quantities, decomposed and thoroughly mingled with the soil to a good depth. The sooner this can be done the better—when the ground is first thrown up into ridges will be the best time.

8. The distance to set the plants in a garden, we have stated above, to be one foot apart, in rows two feet from each other. Be very careful to place the roots in pure virgin earth, and not set too deep. The plants should be well watered when set, and sometimes, if it is dry, the watering should be continued for a day or two afterwards.

9. The bed must always be kept clear of weeds. At first the hoe can be used carefully for a few weeks, and then weed by hand. If tan-bark or sawdust can be had, apply a coating one inch in thickness to the whole bed, care being taken to leave the crown of each plant free. The tan will answer to mulch with, and will keep the soil moist, which is always favorable for the strawberry, and prevents the growth of weeds and thus saves the greater part of the labor and expense of after cultivation in pulling weeds, &c.

In autumn, remove all the runners not wanted, and clean the bed. In *no instance* should one of the new plant's runners be allowed to remain nearer than ten or twelve inches to another plant. Those nearer than this should be taken up and sold or given or thrown away. Do not dig much around or between the rows, lest you disturb the thousands of little fibrous roots attached to each plant and thus maim it.

We repeat, the soil should be most thoroughly trenched, handled, mingled and plowed in the first preparation, so that it will not become readily baked and hard, for the reason that it is so difficult to work among them after the plants have become well grown.

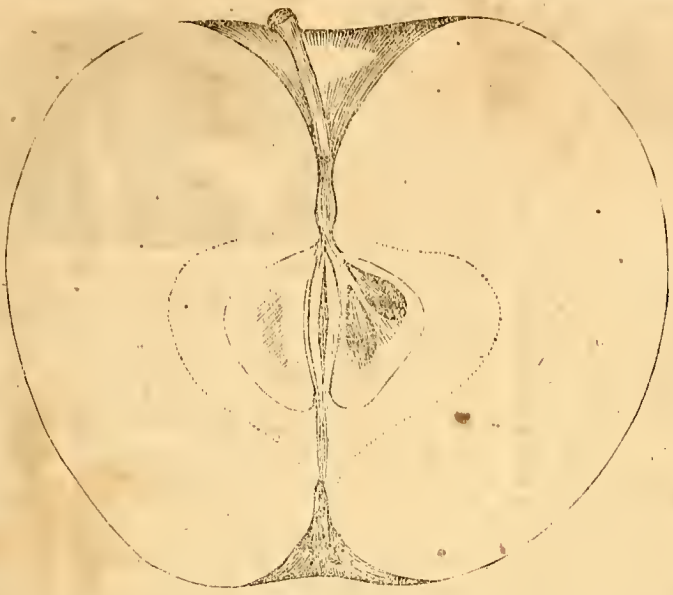
On the approach of winter, throw a light coating of straw or leaves over the bed, to protect it from the frost.

The grand secret of strawberry cultivation is, *plenty of air, pure, fine soil, sun and water.*

R. G. PARDEE.

New-York, February 20, 1856.

What is more beautiful than a well laid off and well cultivated garden.



Rome Beauty.

American. Native of Southern Ohio. In fruit and tree it somewhat resembles Sutton; requires, to perfect good fruit, a rich, warm, loamy soil. On poor clay, it is undersized, deficient in character, and inclined to overbear.

Fruit, large; *form*, roundish; *color*, rich light yellow, mostly overspread and striped with shades of clear bright red; *stem*, slender; *cavity;* open, regular; *calyx*, nearly closed, segments distinctly mild, sub-acid; *core*, medium, somewhat hollow; *seeds*, long, ovate, large and full. *Season*, October to December.—*Elliott's Fruit Grower's Guide.*

From the N. E. Farmer.

How to Grow good Fruit.

There is still large quantities of fruit cultivated that is not worth taking to market. Hundreds of bushels of apples have been made into execrable pies in Boston this fall, merely because they could be purchased at a trifle less cost than those of a better quality. But it is a mistaken economy, as a mild, good-flavored apple would require less sugar and then make a better pie. Many persons have a pride in, and attach too much consequence to an apple which sprang up spontaneously on their own farm, or perhaps, which they have cultivated with some care, and then numbers of seedlings occupy the places that should be improved by finer varieties, and which, if cultivated, would afford a greater profit.

The New York *Tribune* brings to notice the following:

Just see how easy it is to grow better fruit. In Adams county, Ohio, John Loughry has a peach orchard of eleven acres that has yielded him this year five thousand dollars, while peaches have been selling in Cincinnati at twenty-five cents a bushel. It is easy to see that his orchard would not have produced that sum at that price. No, it did not. He got two dollars a bushel more readily than his neighbor got twenty-five cents for the same variety of peaches. And this is how he did it:

"When the peaches had arrived at the size of a hickory nut, he employed a large force and put on one hundred and eighty-five days' work in picking off the excess of fruit. Probably more than three-fourths of the fruit then on the trees was carefully removed. Each limb was taken *by hand*, and where within a space of eighteen inches there would be, perhaps, twenty-five peaches, but five of the fairest ones would be left to ripen. By carefully removing all but the strongest specimens and throwing all the vigor of the trees into them, the peaches

have ripened early, and are remarkable for size and excellence of quality."

There, this was labor—seven months' labor of one man in a small peach orchard! What of it? His net profits were between three and four thousand dollars. If he had neglected his trees his profits would have been a crop of peaches hardly fit to feed the pigs.

In the management of his trees, Mr. Loughry keeps them trimmed in, and annually removes about one-half the wood that is formed. He uses a compost, and omits nothing to bring them to perfection, and thus keeps the trees in full vigor. Will other farmers take a hint and follow so good an example?

From the New England Farmer.

Little Things.

OR A WALK IN MY GARDEN.

ONIONS.

While gathering a few straggling onions from a large bed sown in the spring, I was led to inquire what can be done to get rid of the onion maggot. It is but seldom that a crop can be obtained in this vicinity. I tried one experiment of digging the earth entirely away from the bulb and allowing the stock to lie on the ground till the ravages of the worm were over. The hot sun was too much for them. But this is a tedious process. When a boy, I remember of seeing a succession of bountiful crops of onions raised on a bed where charcoal had been made. I want to wander a few moments from the garden to say a word respecting

CHARCOAL AS A MANURE.

The value of charcoal, in most cases, is usually set too high, at the expense of other substances. The old method of piling together twenty or thirty cords of hard wood, and covering it with turf and trenching the ground all around, not only furnishes charcoal, but what is of more value, an abundance of potash, soda, lime and phosphorus. Hence, great crops of wheat may be raised under such circumstances. A recent correspondent of the *Farmer* tells us how to burn up pine stumps on the ground. I will tell him of a method I once practised, from an article which I read in my boyhood from the *old N. E. Farmer*, which was, to dig a hole under the body of the stump and let it dry, put in some small wood, and before the fall rains bank it up as a coal pit, and set it on fire. It would coal out the body of the stump and render it easy to remove the roots. We always expected to raise huge potatoes on these spots.

Returning to the garden, I find myself looking at

AN EVERGREEN HEDGE.

Thousands of evergreens perish for want of a little knowledge in their management. The safest way is to transplant, from an open pasture, trees not more than two feet in height.—My method is this; I take an old axe which I am not afraid to strike into the ground, and cut a circle round the tree, striking two or three times in the same place if necessary, and at a distance of a foot or more from the trunk; let one person take hold of the trunk close to the ground, and another higher up, and remove earth and all. An evergreen is worth nothing after the earth is removed. With two boys, I have in this way dug and carried in a cart three-fourths of a mile, seventy-five trees, and transplanted them in one half-day; and all but two or three lived, and grew about as well the first summer as if they had not been removed. There is a little secret to be learned in setting out a hedge. Instead of making a long trench first, I take off the turf and lay it one side, and then dig deep enough to set one tree, dig up the earth from the spot where the next tree is to be planted and use it to cover the roots of the preceding one. In this way there is no loss of earth in the grass, and you have ready access to every part of the tree. Evergreens will do better planted in grass land, or in the shade of other trees, where the intense heat of the sun is absorbed. It is almost impossible to make an evergreen live on the sunny-side of a white house, or on a very dusty street.

N. T. T.

Lice on Cabbage.—Last spring I set five or six hundred white drum-head cabbage plants; they looked well, and I was anticipating a very good crop, when suddenly they were attacked by lice in great numbers, which acted so powerfully upon them that they soon began to fail—the leaves curled up, and I was on the point of giving them up for lost, when a thought occurred to me that I would try an experiment. I procured a quantity of sulphur at 7 cents a pound, and mixed with it about twice its bulk of gypsum; with this mixture I dusted the leaves of the cabbage thoroughly; the lice soon disappeared, and the plants began to thrive, and have continued to do well ever since. The prospect is that I shall have a very large crop.

E. C.

The Carolina Cultivator.

RALEIGH, APRIL, 1856.

Experiments in Agriculture—and who shall make them.

It is acknowledged by all that numerous and well conducted experiments are very much wanted in settling the questions that are constantly presented to the farmer. But who is to make them? Some maintain that an experimental farm, supported either by the munificence of individuals, or by that of the State, should undertake every thing of the kind.—While we are satisfied that much might be accomplished by such an institution, still there are matters that belong more properly to individuals. In the present imperfect state of agricultural science, there are many points which can not be settled by a direct appeal to known principles. In such cases it is important that we shall have rules drawn from experience, and these will be more valuable when deduced from the combined observations of many farmers than if they were derived from the working of a few model farms. Astronomy is now the most perfect of the sciences. Observation and theory say the same thing. Knowing the principles by which the motion of the stars are regulated, the Astronomer can predict years before-hand where they will be at any given time. But there was a time, and that not many conturies ago, when the laws which govern the solar system were as little known as those which rule in the building up of a plant. And before men had discovered the true theory of the planets, they had learned to predict with a good deal of certainty their places. The empirical laws which had been gained from long continued and numerous observations finally led to the discovery of the general principles which explained the whole. But passing by the example furnished from the history of Astronomy, we have another still more to the point, and which belongs to our own time and country. A few years ago the winds upon which navigation mainly depends for carrying on the commerce of the world appeared to be governed by no laws, so complex were their motions. But Lieut. Maury has been able to bring out order where all seemed confusion. To do this he did not require only the co-operation of a few well appointed observations, but he asked for the assistance of every hardy navigator that manages a ship. And he received their "Log Books" by thousands. It was from the careful study of the numerous observations thus obtained that he prepared the "wind and current charts," and the "sailing directions," the value of which are so well known, that no prudent sea Captain is willing to be without them. What has been done for navigation may be done for agriculture.

The work of an experimental farm will have an important part to perform in establishing a correct system of farming. But when as much depends upon the number as upon the accuracy of the observations, they can be made better by practical farmers than any one else. Suppose for example that it were required to determine the value of the different kinds of manure for any given crop—such questions as the worth of compost, plaster, lime, guano, or the phosphates when applied to wheat land. In this case the results from a single farm, or from a small number of farms, however well conducted would not be reliable. For the manure that is best suited to one kind of soil may fail for an other. Or when applied at one time of the year it may give a bad result. The cause of failure may be in the season, or the time of planting, or in the manner of working the crop. Now although these sources of error may render the conclusions drawn from a small number of observations unreliable, they will not effect those drawn from long and varied experience. It is expected that the best manure will sometimes fail, at least partially. But if after a fair trial in different years, with different, crops and on different soils a manure is found to be inefficient or to cost more than the profits to be obtained from its use, then it is time to discontinue its application although in a few instances

it may have seemed to yield a large return for the outlay.

It may perhaps be objected that one who has to make his living from the soil he cultivates, has no time to be making experiments—that experiments are costly and therefore can be afforded only by the rich. True enough, a farmer may waste time on idle projects: or if he attempts to try every thing he has ever heard suggested, he will be more likely to loose money than to gain any, and his experience will be a source of mortification to himself and but little profit to any one. There are but few who should venture upon novel or costly experiments. These belong to model farms and to societies, where the motto should be "prove all things," and to men who in addition to a practical acquaintance with the operations of the farm, have been trained to make investigations in the proper way. But although every one is not qualified to conduct an experimental farm, yet all may make valuable observations on the fields he cultivates for a living. All that is wanted is that he should make a true and faithful statement of the facts that come to his notice. It is by such a course alone that the value of theories may be tested, and that investigators shall be directed to the proper subjects for experiments. Other sciences have thus grown up to a high degree of perfection, and why should agriculture prove an exception.—But before we can hope for much to be accomplished it is first necessary that farmers shall become intelligent observers of nature. No single farmer in the narrow limits of his own fields can expect to solve many of the problems connected with his profession, but each may contribute something and receive in return the benefit of the contributions of every other. Beside the good to be accomplished by adding to the general stock of knowledge there is still the influence which a course of close observation will have upon the observer himself. There is commonly too much of treadmill routine in the operations of the farmer. The same thing is done over and over without inquiring of what kind of use it can be. But let the farmer begin to observe and study the processes which are constantly going on before him, and he will soon be able not only to teach others but himself. He will have a new interest in his calling. Reason will take the place of routine and the work of the farm will no longer be considered as suitable for those only who have not sense enough to do anything else.

Now there are farmers who observe well enough, but do not make the best use of their observations. They should communicate them so that others may have the benefit of their experience. This may be done either through the newspapers and periodicals, or at the regular meetings of farmers' clubs and agricultural societies. We have spoken to men of large and successful experience in farming on this subject. Some are willing to write, but they have no skill, they say, in dressing up an article so that it may appear before the public. But we imagine that this objection would have but little weight if rightly considered. It does not require much experience in writing to give a plain statement of facts. In the highest courts of justice a man's evidence is not rejected because his language does not possess all the polish that might be given by a fine rhetorician. What we want to publish in the Cultivator is not specimens of elegant writing, but what will be read with profit by the farmers. If any one have the pen of a ready writer—why so much the better. Such an one can entertain at the same time that he instructs us. But for a plain truthful statement of facts we believe any one will find words sufficient to make himself clearly understood if he will but make the attempt. At any rate, we think the pages of our paper will not be less acceptable by being largely filled with the experience and observations of our readers.

Those however who can not write for the "editor," may have an opportunity of adding to their own and their neighbor's knowledge by attending the meetings of agricultural societies. There the farmer has a chance of comparing his own views with those of others. But how often are such meetings made uninteresting and unprofitable, because those who know most of farming say least, with the excuse that they do not know how to make a speech.

We have not spoken particularly of the kind of experiments which should be made by experimental farms. These, if well conducted would bring a large return to the community that will support them. We may consider them some other time. Also agricultural societies both State and County have it in their power to carry on investigations, by the offer

of prizes, that would not be undertaken by individuals. Societies may likewise render valuable service to the farming interest by introducing new varieties of seeds and grain for cultivation, by testing new implements and machinery, and by importing improved breeds of stock.

Curing of Green Tobacco.

There are one or two suggestions in the following letter which may not be wholly destitute of interest to the tobacco growers of this State. We have ourselves often seen the plan practised in the Western States, and therefore vouch for the general correctness of the statements.

There is one objection to this mode of curing green tobacco, however, which S. M. L. does not mention, that is, the loss which it sustains in weight. The rich bottom lands of Tennessee and Kentucky will produce from one thousand to twelve hundred pounds of cured tobacco to the acre, exclusive of the stalks and inclusive of the stems. This is about one pound for three plants, allowing each plant twelve square feet. If cut before fully ripe the yield will be far less than this, depending of course upon the degree of its maturity. If moreover this green tobacco be drenched by rains and blown upon by the winds while undergoing the process of curing, it will suffer a still farther diminution in weight, so that, although the quality will be, as S. M. L. says greatly improved, yet the loss in weight will be considerable. In making an estimate therefore of the gain which results from the improved quality, the loss in quantity should not be neglected. We give the letter of S. M. L. entire and in his own unambiguous language:

For the Carolina Cultivator.

MR. EDITOR:

It is a very great mistake among the tobacco growing portion of the community to suppose that tobacco cut green is valueless or nearly so. I own that formerly I was of the same opinion, until having made some experiments, I was fully convinced of my error.

In 1850, as will be remembered, we had an early frost and nearly one-fourth of the tobacco crop was destroyed. The unusually cool mornings in the early part of September, which presaged the frost, alarmed many farmers who had large crops standing, and the consequence was that a very large portion was cut unripe, and cured up in the ordinary way. It is a well known fact that tobacco cut green and fired immediately will remain green after it is cured and will bring a very small price. Having planted mine late in the season, I was forced to put the knife to a greater portion of it while it was yet green. For want of house-room, I erected scaffolds in the fields, and put the sticks, having nine or ten plants on each, some eight inches apart. After staying on the scaffolds for nearly a week I had it transferred to my barns and cured. It happened however that there was more on the scaffolds than was needed for filling the barns. This I let remain. Before it could be removed it set in raining and continued to rain for several days. I expected of course that it was ruined, and thought but little more about it, until happening to pass by some days afterwards where it was hanging, I was no less surprised than delighted to see it exhibiting a bright and beautiful color. It contrasted strangely with the dull, dingy green color of that cured up within doors by the agency of fire. That cured upon the scaffolds, too, had a silky feel—elastic and tough; while the other was rough and brittle—resembling tobacco after it has been injured by lying too closely together when first cut, or "house-burnt" as it is technically called by farmers.

The next year in order to satisfy myself that there was no unfairness in the experiment I repeated it, and obtained precisely the same results. Ever since then, Mr. Editor, when I have been so unfortunate as to be obliged to cut some of my tobacco green, I have suffered it to remain in the field until cured.

S. M. L.

Montgomery Co., Tenn.

AGRICULTURAL PUBLISHERS.—From a personal examination of the establishment of C. M. Saxton & Co., we fully endorse the following from the New York Day Book:—

"The literary correspondent of the Boston *Traveller*, referring to the publishing house of C. M. Saxton & Co., of this city, says:—

"It is an item worthy of note that New York contains the *only* publishing house in the United States, indeed in the world, which devotes itself *exclusively* to the publication of agricultural works. This house is that of C. M. Saxton & Co., which has not long since moved

into commodious rooms at No. 140 Fulton street near Broadway. Here they keep a complete assortment of agricultural works, and a reading room supplied with all the agricultural and horticultural journals of Europe and America. Their list of publications comprises nearly one hundred different works, embracing the whole range of farming, gardening, planting, &c., &c. Mr. Saxton founded the house some nine years since, and for several years has confined himself directly to the specialty we have referred to. It argues well for the intelligence of the agriculturists of this country that they require so large an establishment to supply them with publications bearing upon the diversified interests of their occupation. Among the publications of this house just issued are—The Grape Grower's Guide, The Cranbery Culture, Strawberry Culture, and Peroz's Culture of the Vine. They have also in press a new work by W. N. White, of Athens, Geo., upon Gardening for the South, intended specially for that section of our country."

We take pleasure in corroborating the above, and would refer our readers to the advertisement of Messrs. Saxton & Co., in this issue of our paper. This firm, by devoting itself directly to the interests of the agricultural community, has furnished a vast amount of practical knowledge to the public, and by the reasonable price of their publications, placed them within reach of all classes. Farmers, planters, gardeners, &c., who want agricultural books, will always be able to procure them of this firm the great leading house of the kind in the United States.

New Books.

The American Grape Grower's Guide—Intended especially for the *American climate.*—This is a practical treatise on the cultivation of the Grape-vine in each department of *Hot-house*, *Cold-grapery*, *Retarding-house*, and *out door culture*, with plans for the construction of the requisite buildings, and giving the best method of heating the same. Every part being fully *illustrated.* By William Chorlton, author of "The Cold-Grapery," &c. Published by C. M. Saxton & Co., Agricultural Book Publishers, 140 Fulton St., New York. The price of this valuable work is only *sixty cents*, and may be obtained of Mr. W. L. Pomeroy in this city. Like all the works published by Saxton & Co., this book is gotten up in beautiful style, and we confidently recommend it to those engaged in the culture of the grape, or to those desirous of engaging in its culture.

The Principles of Practical Agriculture, by Albert D. Thaer, *translated by Wm. Shaw and Cuthbert W. Johnson*, New York; C. M. Saxton & Co. Agricultural Book Publishers.

We would call the attention of our readers to the above work, It forms an octavo volume of five hundred and fifty-one pages, and is gotten up in good style, both in the printing and paper. To those farmers who are satisfied with a little knowledge of their calling, we would not recommend this book; there are others much cheaper that would suit them better.—But to the intelligent, well-read farmer, who studies his profession, and who knows how to unite practice with science, we say buy the book. Thaer wrote for German farmers, and therefore there is much that does not apply directly to our country and customs. He also wrote before Chemistry and Geology had attained the degree of perfection which they now have, and therefore his work can not be considered as representing the present state of our knowledge of agriculture. But after making due allowance for these defects, there still remains a large amount of valuable information on nearly all branches of farming. And as it is information gained from the experience of such a man, its value will not be easily overrated. Thaer was the most successful cultivator of his time. Educated as a physician, and after he had gained a very high position in the practice of that profession, while still quite young, he devoted his time and talents to the improvement of agriculture. Here the same masterly mind, which had given him the first rank among physicians, soon placed him at the head of the farmers of Europe. His fame soon spread thoughout the land, and Kings and Princes delighted to do him honor. His farm became the admiration of all who saw it, and attracted visitors from far and near.

Courtship and Marriage—or, the Joys and Sorrows of American Life: By Mrs. Caroline Lee Hentz, author of "Aunt Patty's Scrap Bag," "Linda," &c., complete in one large duodecimo volume, of over 500 pages, neatly bound in cloth, for one dollar and twenty-five cent; or in two volumes, paper cover, for one dollar.

This work is published by T. B. Peterson, No. 102 Chestnut street, Philadelphia, who will send either edition to any one, to any part of the United States, *free of postage*, on remitting

the price of the edition they may wish. Mrs. Hentz it will be remembered, by many of our readers, resided for some time at Chapel Hill in this State, her husband being connected with the University of North Carolina. This work promises to be fully as interesting as any of Mrs. Hentz's former productions.

THE FAMILY KITCHEN GARDENER; *containing plain and accurate descriptions of all the different species and varieties of culinary vegetables, by Robert Buist, New York, C. M. Saxton & Co.*

A good practical book. The cultivation of vegetables is too much neglected by our farmers. By paying more attention to this branch of their business they would become both richer and *healthier.*

THE ISLAND OF CUBA: Derby and Jackson will publish in a few days. *The Island of Cuba* by Alexander Humboldt, translated from the Spanish with notes and a preliminary Essay, by J. S. Thrasher. Bringing down the history to the present time. With a map 12 mo. Price $1.25.

The interest excited amongst us by Cuban affairs will make this interesting work of Humboldt a great acquisition to the literature of the day. The knowledge which Mr. Thrasher has of Cuba from a long residence there eminently qualifies him for the preparation of such a work.

Exchanges.

The ECLECTIC MAGAZINE for the month of March is one of great and unusual attractions. It is embellished with a fine engraved likeness of James Fennimore Cooper, who is the subject of an article taken from the Dublin University Magazine.

LE BON TON, for March is also on hand. We have repeatedly noticed this beautiful monthly, devoted to fashions. It is not more elegant than useful.

GODEY for April, flashes upon us with all its accustomed splendor. The embellishments and illustrations are numerous, tasteful, and seasonable.

We have received a copy of the last annual Report of the managers of the Pennsylvania Institution for the instruction of the Blind.

ARTHUR'S HOME MAGAZINE for April has been on hand for some days. It is always a welcome visitor, bringing with it a good supply of pure and solid reading.

PETERSON'S LADIES NATIONAL is also on our table, and presents its usual beauties and attractions, especially for the gay and sentimental.

A neat pamphlet has reached us from the department of State, containing the decrees and arrangements of the French government for an Exposition of Procreative Animals, Agricultural Implements, &c., in May of this year, and also in '57. The competition is open for all, and the prizes very inviting.

"FRANK LESLIE'S GAZETTE OF FASHIONS AND THE BEAU MONDE," for the month of March presents its usual array of merits and beauties.—Frank is certainly achieving the immortality to which he aspires.

THE SOUTHERN LITERARY MESSENGER, for April is before us in good time. Its table of contents presents a considerable variety of articles, mostly original. Although we do not like its new form, we rejoice in the brightening prospects of the Messenger, and hope it will now be permanently established.

Executive Committee of Granville County Ag. Society.

Thomas J. Blacknall, Chairman; Col. William R. White, William M. Blackwell, N. E. Canady, Wiley Perry, John B. Hicks, Edward H. Lyon, John Bullock, Jeff. Horner, William E. Wyche, H. H. Burwell, James Fuller, P. W. Wyche, John M. Bullock, John J. Speed, Jas. B. Daniel, John C. Taylor, Littleberry Stone, Doc. John R. Hicks, Col. S. S. Royster, T. L. Williams, Col. P. E. A. Jones, Hartwell Hargrove, S. S. Cooper, D. P. Paschall, Arch. Davis, William A. Harris, John S. Burwell, Doc. B. S. Cole, T. B. Lyon, Carter Wallor, Allen C. Cozart, John Mann, Doc. James B. Hobgood, A. W. Venable, C. H. K. Taylor, Thomas Miller, H. T. Watkins, R. P. Hughes, William A. Eaton, T. H. Rainey, A. R. Burwell, I. M. Paschall, Doc. A. C. Harris, R. H. Gregory, Dr. Jas. A. Russell, John H. Webb, Dr. James L. Wortham, Wm. Clements, W. L. Allen and J. H. Davis.

Five members including the Chairman constitute a quorum for transacting business.

A. C. HARRIS, Sec'y.

Communications.

For the Carolina Cultivator.

Saxonville, Feb. 29, 1856.

Many thanks to you, Mr. Editor, for your kindness in sending me the Cultivator for February. It did not reach me till the 23rd inst., having been detained, I suppose, on the route in consequence of the severe snow storms; but it was none the less welcome on that account. I have scanned over its contents with very great pleasure, and I trust with some profit. If the present number be a fair specimen of what you do and can give to your readers, I see no reason why your farmers need feel ashamed of *home* productions. It is a capital number,—abounding with good common-sense views and descriptions of things, just as nature presents them to man;—and containing just enough of scientific terms to render the subjects treated of, interesting and intelligble to every class of readers. To persons cultivating moderately sized gardens, the single article of superphosphate of lime alone is worth, to any one of them, ten times the amount of his annual subscription for the paper. The article, in clear and simple language, tells them what superphosphate of lime *is*, *how* to make it, and *how* to use it, without the intervention of hard, long, jaw breaking words. This, I am aware, is saying a good deal in favor of the article; but it is not, in my judgement, saying one jot too much, when it is remembered that so many writers on the subject have, hitherto, seemed to suppose that the more hard words they could crowd into their pages, the easier it would be for common people to understand all they said. I would not, however, have you, Mr. Editor, think that I wish to decry the use of scientific terms in Agriculture; it is only against the abuse of such terms that I protest. It is all very natural and very good for Grammarians to talk about *roots*, Chemists about *atoms* and *acids*, Mathematicians about *curves* and *functions*, or Astronomers about *planetary perturbations*; but honest farmers want that kind of science which will lead them to the very *heart* of the subject they may wish to look into, by the shortest possible way. The road that will lead them to this goal they care not by what name it is called—Royal or Republican.

My experience in practical farming is exceedingly limited; yet I feel deeply interested in its progress and prosperity; and greatly do I rejoice when any of my fellow-citizens strikes out a new path, or develops a new feature, in that science which the father of our beloved country has defined to be "the most healthy, the most useful, and the most noble employment of man." I have paid some attention to manures. I have experimented with a goodly number of the special manures recommended by Johston and other writers on Agricultural Chemistry, and have come to the same conclusion as your correspondent *Delwin*, viz: that superphosphate of lime is "the best of any manure I ever used," not only for "corn," but for every kind of garden vegetables. Three years ago, the coming spring, I purchashed two bags of DeBurg's superphosphate of lime, each bag containing 150 lbs., and applied to a cornpatch of about half an acre. A handful to the hill was the quantity recommended to be used, as amply sufficient to produce a good yield; this I thought would not do as well as two handfuls to the hill. Accordingly, on the first of May, I took a bucket full at a time and dropped two handfuls on each hill, my boy following, dropped the seed upon it, and another hand covered the whole with a hoe.—When, however, I had got over about two-thirds of the patch, I began to fear that my manure would not hold out at the rate I was serving it out, I therefore slacked off to one handful to the hill. The corn all came up beautifully, and no perceptible difference could be perceived between the two lots up to the second hoeing.—After that the difference became more perceptible every week, and although they both silked and matured about the same time, yet the two handful lot was nearly two feet taller than the one-handful lot, and the yield of the former was fully twice as large as the latter. The former was unaffected by the severe drought, the latter felt it by the curling of the leaves; whilst some neighboring lots, belonging to other parties, were nearly destroyed. The two past seasons I tried this most excellent manure on peas, beans, cabbage, onions, potatoes, &c., &c., with very satisfactory results. Last spring I got from New York, eight barrels of the Lodi manufacturing company's pondrette. I had read a great deal about this manure, and felt anxious to test its qualities with those of super-phosphate of lime. My most reliable experiments were upon corn and potatoes. I planted, on the same day, three

rows of sweet corn and six rows of early potatoes —each row about ten rods in length, and about four feet apart. On two rows of corn I applied about double the quantity of poudrette that is prescribed in the company's circular, and on the third row a proportionate quantity in value, of super-phosphate of lime. The poudretted rows came first and kept the lead till after the second hoeing. Then the phosphated row stole a march upon them, shot ahead and kept them at a respectful distance ever after. The two rows silked first, and gave corn for the table nearly three weeks before the one row—all from the same seed be it remembered. The two rows yielded an average of *one* good ear to the stalk; the one row yielded an average of *three* ears to the stalk—much larger than the largest ear of the two rows. There was more fodder from the one row than from both the other rows. The potatoes were planted about eighteen inches apart in the row. Three rows were manured with poudrette and three with super-phosphate of lime, in equal quantities as to value—but each lot with double the quantity prescribed by the respective manufacturers. The poudretted rows came first, and were ready for the table about nine days before the phosphated rows.—The latter rows never lost their deep green color till the frost took them—fully a month after the former had given up the ghost. The yield of the phosphated rows was four times as large in bulk and weight, as the poudretted rows, and the eating qualities were nearly in the same proportion.

The great advantage of super-phosphate of lime over other special manures consists, (in my opinion,) in this: It can be applied in the hill, or sown with the seed, without the slightest injury to the seed; whilst poudrette or guano, it is well known, cannot be so applied. Either of these will kill the germ of the seed if brought into too close contact with it; but more on this subject some other time.

MASSACHUSETTS.

For the Carolina Cultivator.

Descriptive Catalogue

Of Peaches that have been tested by actual bearing, previous to and during the year 1855, *by* Joshua Lindley, *New Garden, Guilford County, N. C.*

[The following is the first of an interesting series of numbers on a very important class of the products of our State, contributed to the Carolina Cultivator, by Mr. Lindley, who has been for many years engaged in the experimental culture of fruit, and he speaks from a long experience which ought to have qualified him for its successful pursuit. His statements and opinions are well worthy of the attention of the public. At our last Annual Fair, he exhibited some of the results of his assiduous and persevering efforts in this branch of industry, and many of our readers will remember the large and beautiful assortment of fruit that was heaped upon his tables. We bespeak for Mr. L.'s articles an attentive examination, and hope his example will find many successful imitators in this State. Our climate and soil are both admirably adapted to a large variety of products of this character, and both the tree and the vine should enter largely into our industrial pursuits.—Ed. Cul.]

DESCRIPTION OF PEACHES—1855.

1. *Early Red Nutmeg.*—This is the earliest peach that has ripened with me, It is a small fruit, about an inch and a quarter in length, and one eighth less in diameter. It has a nice red cheek, with the opposite side marbled with red; and the fruit ripened with me this very late season, the 27th of June, and will ripen common season the 15th of that month. The tree is of very dwarfish growth, with uniform glands and large flowers, and is only worth cultivation as the earliest peach that ripens. It is very productive.

2. *Early White Nutmeg.*—This peach commenced ripening its fruit just eight days after the first. It is a little larger and similar shaped. Color much dotted, with red on a white ground, and when fair to the sun showing quite red. It is a little more acid than the other, though a pleasant fruit, and is only valuable as ripening between the first, and the finer varieties of the early peaches. It is very thrifty tree with uniform glands and small flowers, and is a great bearer, and commenced to ripen its fruit this late season on the 15th of July.

3. *White Nutmeg, (Common.)*—This is about twice the size of the early white, and is much superior to it in sweetness and fine flavor, and it commenced to ripen just one week after that did; but it is of very dwarfish growth, and a thin bearer which renders it unworthy of extensive cultivation.

4. *Sweetwater.*—This is of good medium size; color white, with some touches of red on the

sun side. It is a juicy, good peach, but the tree is a bad grower of dwarfish habit, and a poor bearer; and as it scarcely ripens before Early Anne and Early York, it is of little value. It has serrated leaves and large flowers.

5. *Early Anne.*—This is a fine early peach, of a greenish white color, a little under medium size. It has serrated leaves and large flowers, and is nearly as smooth skinned as an apricot, and grows thrifty and bears abundantly, and ripens its fruit rapidly a few days before the Early York, and is highly worthy of extensive cultivation; and it began to ripen its fruit the 17th of July.

6. *Early Tillotson.*—A good early peach of fine flavor, of nearly medium size, somewhat three-sided in shape, rather long in form, mostly of a fine red color. The tree is a thrifty grower and a good bearer, with serrated leaves and small flowers, and it ripens with the Early Anne,

7. *Early York.*—This is the great peach of the season in which it ripens. The tree grows very thrifty and bears most abundantly when very young, so much so that it ought to be thinned in full bearing seasons to enable the fruit to ripen fine. It has serrated leaves and large flowers. The fruit when well grown is of nearly medium size, and of a rich, juicy and fine vinous flavor, color red next the sun, on a greenish white ground, and when fair to the sun almost entirely red; in the shade but little touched with red. It commences ripening with the Early Anne, but ripens very slow for the first week, after which time it ripens rapidly until it is through. It commenced to ripen between the 2nd and 8th of July every season that it has borne with me before.

8. *Baltimore Beauty.*—This is a handsome and fine fruit, of good medium size, rather oval, tapering to a point at the top, color yellow, with a red cheek next the sun. Flesh pretty rich, sweet and fine flavored. This is an excellent early peach, and good bearer when young. The tree grows thrifty, has globose glands and large flowers, and deserves to be cultivated extensively, and it begins to ripen two or three days after Early York.

9. *Cole's Early.*—This is a fine early fruit of medium size, ripening two or three days after the Early York The tree grows thrifty, has globose glands and small flowers, and does not bear as well with me as the Early York.

(To be Continued.)

What do the Physicians say?

Listen to the testimony of an eminent physician in favor of M'Lane's Vermifuge, which is now universally acknowledged to be the best in use; even members of the medical faculty (who are so often opposed to the use of patent medicines,) cannot withhold their approval of this invaluable remedy:

Lisn, Stark Co., Ohio, Jan. 8, 1849.

I have used Dr. M'Lane's Worm Specific in my private practice, and am prepared to say that the unparalleled success with which I have prescribed its use, both for children and adults, induces me to say the most in its favor of any specific or patent medicine ever before brought to my notice. The mode of administration, the smallness of the dose, and the certainty of its efficacious effects, give it, in my opinion, a decided advantage over any other medicine of the kind before the public.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa.** All other Vermifuges in comparison are worthless. Dr. M'Lane's genuine Vermifuge also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Have you Diseased Liver?

The question, though startling, is sufficiently suggestive, when the fact is taken into consideration that diseases of the Liver have become most alarmingly frequent in the United States. Indeed, there are few formidable diseases that are not in some way traceable to a deranged state of that important organ. Many of the complaints usually classed under the head of Consumption, have their origin in the Liver. "Any remedy that would insure regularity and healthful action in the Liver, would be a blessing to mankind!" has been the exclamation of thousands. That remedy has been found; it is safe and sure. When a fair trial has been afforded it, it has never been known to fail.

Reader, have you any disease of the Liver, or disease which you believe proceeds from hepatic derangement? Lose not a moment, but purchase a box of Dr. M'Lane's Pills, and they will restore you to health. It is the only remedy yet discovered, in which implicit confidence may be placed.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Liver Pills, manufactured by Fleming Bros. of Pittsburgh, Pa.** There are other Pills purporting to be the Liver Pills, now before the public. Dr. M'Lane's genuine Liver Pills, also his celebrated Vermifuge, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

NERVOUS DISEASES CONTROLLED AND CONQUERED.—Of all the various ills that detract from the enjoyment of human life, most of them may be traced to a disordered condition of the nervous system. The horrors of Epilepsy, or Falling Sickness, arise in most cases from this cause. Our readers may remember, on several occasions before, we have alluded to the wonderful cures, or modifications of Fits, made by the Vegetable Extract Epileptic Pills, invented and prepared by DR. SETH S. HANCE, of 108 Baltimore street, Baltimore, Md. We feel fully satisfied that these Pills have cured some of the most stubborn cases of Epilepsy, as well as the milder forms of Fits, such as severe Cramps, Spasms, &c. We now record the fact, that persons will find these Pills equally efficacious in curing every form of nervous debility;—no matter whether manifested in the acute and excruciating form of Neuralgia, Tic-Doloreux, or Nervous Headache, the misery of Dyspepsia or Indigestion, the sufferings of Rheumatism or Gout, the melancholy hallucination of depressed spirits or hysteria, their effects will be equally happy and certain. Persons in the country can write to the inventor, and have the medicine forwarded to them by mail. The price is, one box, $3; two, $5; twelve, $24; and sent to any part of the country, free of postage. Direct your communications to SETH S. HANCE, 108 Baltimore street, Baltimore, Md.

Table of Contents.

Agricultural Publications..... 51
Blood Stock..... 37
Cough Medicine for a Horse..... 37
Curb or Check Reins on Horses..... 41
Canary Birds..... 43
Curing of Green Tobacco..... 51
Communications..... 54
Descriptive Catalogue of Peaches..... 55
Experiments in Agriculture, &c..... 49
Exchanges..... 53
Executive Com of Granville Co. Ag. Society..... 53
Green Corn for Soiling..... 38
How to grow good Fruit..... 47
How to Burn Coal..... 42
Indian Loaf..... 37
Little Things..... 48
Lice on Cabbage..... 48
Medical Notices..... 56
New Books..... 32
On Milking..... 41
Potatoes for Planting..... 37
Rural Cottage..... 40
Remedy for Indigestion..... 42
Raising Strawberries..... 45
Rome Beauty—Apple..... 47
Sharpening Edge Tools..... 35
The Value of Manures..... 33
The Cost of Raising Cotton..... 36
Trimming Trees..... 36
The Roller and its Advantages..... 39

Advertisements.

ATKINS' AUTOMATON:

OR,

SELF-RAKING REAPER AND MOWER,

BEST MACHINE IN USE.

1 (the first) used in 1852.

40 used successfully in 1853.

300 in twenty different States in 1854

1200 in all parts of the Union in 1855.

3500 building for the harvest of 1856.

THERE ARE SIX GOOD REASONS FOR this unparalleled increase and great popularity: 1st. It is strong and reliable, and easily managed. 2d. It saves the hard labor of Raking. 3d. It saves at least another hand in binding. 4th. It saves shattering by the careful handling in raking; besides, the straw being laid straight, it is well secured in the sheaf, and does not drop in the after handling, and the heads are not exposed in the stack, so that the GRAIN saving even exceeds the LABOR saving. 5th. It is a good Mower, being one of the best convertible machines in use. 6th. It has a knife that does not choke.

Its other excellencies, too numerous to mention here, are fairly given in the circulars. Its intrinsic worth is also attested by the award (mostly in only 3 years) of

OVER 70 FIRST PREMIUMS!

PRICE.—REAPER AND MOWER, $200,—$75 on its receipt, $75 first September, and $50 first December. Price of SELF-RAKING REAPER only $175. Considerable saving in freight to those at a distance who order prior to 1st March; also liberal discount for advance payment.

To secure a Machine, order immediately. Though so little known the past season, and none ready for delivery till 1st May, yet not two thirds the customers could be supplied. The reputation of the Machine is now widely established, so that THREE THOUSAND will not as nearly supply the demand as twelve hundred did last year, and we shall also be selling four months earlier.

☞ Order early, if you would not be disappointed.

PAMPHLETS giving IMPARTIALLY the OPINIONS OF FARMERS, together with orders, notes, &c., mailed to applicants, and prepaid.

☞ Write to us at CHICAGO, (Ill.,) DAYTON, (Ohio,) or BALTIMORE, (Md.,) which ever is nearest to you.

J. S. WRIGHT & CO.

"Prairie Farmer" Works, Chicago, Dec. 1st, 1855

1—4m.

FARMER'S HALL,

RALEIGH, N. C.

The subscriber is general agent for the sale of Agricultural Implements and Farming utensils, Field seeds, Fertilizers, &c. &c. Almost all the articles brought to the late Fair are kept on sale and are offered at manufacturers prices with no cost of transportation, as they were brought free by the Railroad.

There is also a new fire proof Ware House on the lot, in which all articles on consignment are stored. The following are some of the articles brought to the late Fair: Horse Powers, Wheat Fans, Corn Drills, Field Rollers, Corn and Cob Crushers, Harrows, Cultivators, and Plows of every size and description.

JAMES M. TOWLES.

Raleigh, March 1, 1855. no. 1—tf.

OUR CATALOUE OF AGRICULTURAL BOOKS,
COMPRISING SEVENTY FIVE DIFFERENT BOOKS ON AGRICULTURE,

Will be sent postage free to all who will favor us with their name and address.

Among the books recently published by us are:
CHORLTON'S GRAPE-GROWER'S GUIDE. 60c.
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THE STABLE BOOK. $1.
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PRACTICAL LAND DRAINER. 50c.

For Sale by all Booksellers, or sent by as free of postage on receipt of price.

C. M SAXTON & CO.,
Agricultural Book Publishers,
No. 140 Fulton-st., N. Y.

April, 1856.—1t.

RINGLETS! RINGLETS! RINGLETS!

CURL YOUR HAIR.

AFTER MUCH STUDY, TOIL AND EXPENSE, I have discovered the secret of making the most straight, uncouth and coarse-looking hair, either to CURL or WAVE, at the option of the individual, in the most graceful manner, for life; thus enabling persons greatly to improve their appearance. Only three applications of my preparation are necessary. The preparation, which is not only perfectly harmless to the skin and hair, but renders the latter permanently silky and glossy, does not cost more than *fifty cents*, and the materials of which it is composed can be bought anywhere. I will send the RECEIPT for making it, to any person who forwards me ONE DOLLAR, by mail, pre-paid. Address

PROFESSOR H. N. ROWLAND,
Practical and Analytical Chemist, Philada., Pa

The RECEIPT and one bottle of the PREPARATION, sent free by mail, for $2. 10tf

THE NEW YORK HORTICULTURAL REVIEW:

A JOURNAL OF SUBURBAN ART.

SUPERBLY AND PROFUSELY ILLUSTRATED.

Devoted to the Advancement of the Rural Interests in America.

THIS is one of the largest and most elaborate works of the kind in the world.

Rural Architecture forms one of the principal features. Each number contains from two to four engravings of model cottages, from designs by eminent and skilful architects. Space is also assigned to the useful art of Landscape Gardening; engraved plans of gardens in every style, and adapted to the peculiarities of different orders of architecture, beautify the work.

Engravings of new fruits, new flowers, new vegetables, &c. are illustrated and described as soon as their respective qualities can be determined, forming the most complete and elegant Manual of Rural Husbandry ever attempted.

An experienced corps of practical writers, seven in number, are engaged to fill its columns.

It contains seventy large pages, and is printed on the finest pearl-surfaced paper, manufactured expressly.

TERMS:—$2 per annum, payable invariably in advance. Fifty cents commission on each subscriber allowed to those who act as agents. $1,000 will be distributed at the end of the year among those who send us the twenty largest lists of subscribers. These premiums will be paid in cash. The first premium will be $500.

The following are selected from hundreds of notices, voluntarily contributed by contemporaneous publications:

The Horticultural Review deserves the most liberal patronage. It is not only eminently practical, but is written in a style that equals the best efforts of the late A. J. Downing.—*Knickerbocker.*

The most elegant and useful book of the kind that has ever come under our observation.—*Register.*

Mr. Reagles, the Editor of the Horticultural Review, is a practical pomologist, and one of the finest scholars our country boasts of. He possesses the glowing descriptive powers of Dickens, the elegant gossip of Walpole, combined with a thorough knowledge of rural art.—*State Police Tribune.*

Farmers, buy it for your sons, buy it for your daughters. It is a rich intellectual treat; a rare combination of the beautiful and the useful.—*Argus, N. Y.*

We had thought that in Downing's death, the eloquent advocate of rural adornment had become only a cherished remembrance: but in Mr. Reagles we discover an equally rich mine of mental wealth, that betokens the influence of the spirit that is gone.—*Montross Tribute.*

Advertisers will find this an unsurpassed medium of publicity, as the Horticultural Review circulates extensively in every State in the Union. Advertisements inserted at the rate of $10 per page.

WOOD ENGRAVING.

Those requiring Wood Engraving, can have their orders executed in an unrivalled manner. *Special attention* is given to views of ANIMALS; an experienced English Draughtsman is engaged for this express purpose. Persons living at a distance can forward a daguerotype of the object [by mail] they wish engraved, which will be a sufficient guide to obtain a perfect *fac-simile.* Stock Breeders will be dealt with on very liberal terms.

Our Exchange list is already very large. A further extension is not desired, unless publishers are willing to give the above advertisement several insertions in their respective papers.

Agricultural Books can be furnished on every useful subject, from both English and American publishers, by enclosing to our address the price of the book required.

Specimen copies will be forwarded on the receipt of 18 cts in postage stamps.

C. REAGLES, Publisher,
March, 1856. 208 Broadway, New York.

LIFE PRESERVING
PATENT SWINGLETREE.

THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed, with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached to it. It is a cheap safe, and certain protection against danger. It can be attached to old or new vehicles.

Notice is hereby given, that any infringement on this Patent, or any immitation, or attempt to make or use by any modification, this Patent Swingletree in any of the counties above enumerated, the person or persons so offending will be prosecuted to the full extent of the law, in the U. S, Courts at Washington.

P. P. WILLIAMS & CO.

Raleigh, Feb. 14, 1856.

H. D. TURNER,

GENERAL BOOK AGENT,

No. 1 Fayetteville Street, Raleigh, N. C.,

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Has for sale, in quantities or by retail, an extensive assortment of Books and Stationery, Comprising Greek, Latin, French, Spanish and English Books; School Books; Blank Books; Juvenile and Toy Books; Miscellaneous Works; with all the New Publications as they issue from the Press: also a large assortment of Stationery and Fancy Articles.

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N. B.—BOOKBINDING done, in all its various forms, with neatness and dispatch.

☞ GARDEN-SEEDS.—To be had at the North Carolina Bookstore, Garden-Seeds, warranted fresh and good, crop of 1855, selected from the most approved Seedsmen and Gardeners in the Northern Country.

February, 1856. tf

MOWING AND REAPING MACHINES.

ALFRED M. TREDWELL invites the attention of the Farmers of North Carolina to his arrangements for supplying Mowers and Reapers to that State.

Parties desiring information will please address him, stating the kind and amount of work they want a Machine for, and their letter will meet with prompt attention.

The machines most suitable for their wants will be kept constantly on hand, but parties wanting a Machine would do well to order early.

Having succeeded to the business in Agricultural and Horticultural Implements, Machinery, Fertilizers, &c., heretofore conducted by Messrs. Ralph & Co. at No. 23 Fulton street, he is prepared to furnish goods of his own make, of good quality and at low prices. A fine assortment of goods in the line always on hand.

In connection with extensive farming operations for some years past, he has given much attention to the raising of Short Horn, North Devon and Ayershire Cattle and other fine stock, and now offers to parties wishing to purchase stock, the advantage of his knowledge and experience

Union Agricultural Warehouse and Seed Store No. 23 Fulton street, (near Fulton Market) New York City. April, 1856.

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Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete assortment of the most approved Farming and Horticultural Implements, of good quality and at low prices.

For sale by R. L. ALLEN,
189 and 191 Water Street, N. Y.

Jan. 1856

Newbern Agricultural Warehouse.

WILLIAM H. OLIVER, & CO.,

GENERAL COMMISSION MERCHANTS Newbern, N. C Among our stock of Agricultural Implements may be found Ploughs, embracing some 40 different kinds.

Straw Cutters of all the most approved kinds, varying in price from 5 to 50 dollars a piece; Corn Shellers, from 7 to 60 dollars a piece; among which may be found Readings celebrated Sheller, capable of shelling and fanning at same operation 2000 bushels corn per day. Also, the verticle cylinder, double and single iron and wooden spout shellers.

Grain Fans from 15 to 34 dollars a piece, among which may be found the best Fans in use. Wheat Thrashers and Horse Powers complete, capable of threshing 300 bushels wheat per day. Cultivator's, Harrows, Horse Rakes, Horse Hoes, Improved Scythes and Cradles. Plough Castings of every variety; farmers Boilers and Cauldrons; Sausage Meat Cutters and Stuffers; Pure Peruvian and Mexican Guano; Chappells Fertilizer; Ground Plaster; Bone Dust; Prepared Guano, Poudrette, &c. &c.

Hoe & Co's Warranted Circular and other Saws: Patent Leather Banding; Best Bolting Cloth; Mill Machinery; Mill Stones; Water Wheels; Premium Georgia Cotton Gins, and Gin Gearing, &c., &c., &c., all of which will be furnished on the most liberal terms by WILLIAM H. OLIVER & CO.

Newbern, January 1, 1856.

Strict attention given to the sale of all kinds of country produce.

DR. STRONG'S COMPOUND SANATIVE PILLS

These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints. Chills and Fever, Dyspepsia, Costiveness, Liver Complaint. Jaundice, Sick Headache. Scrofula, Salt Rheum. Fevers of all kinds, Loss of Appetite, Obstructed and painful Menstruation. and all lingering diseases.*

As a Female Medicine they act like a charm. and when taken according to the directions, they never fail to cure the worst cases of **Piles**, after all other remedies fail.

They purify the blood, equalize the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action: and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

Also

DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds, Catarrh, Bronchitis, Croup, Whooping Cough. Asthma. Consumption. Nervous Diseases, Dyspepsia. Costiveness. Erysipelas. Disease of the Heart, Inflammation and Pain in the Chest. Back and Side, and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food. in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant. Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups. Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capable of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regular Appetite, and Strengthen the System.**

Price 25 cents per box. containing 25 doses of Medicine.

Call on the Agents who sell the Pills, and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of cures.

Both kinds of the above-named Pills are for sale in **Every Town and Village in North and South Carolina.**

And at Williams & Haywood, Raleigh, N. C.
May 1855. 3—

GREENSBOROUGH MUTUAL INSURANCE Company. The cost of Insurance on the Mutual plan is but a small sum, compared with a joint stock company. This company being located in the Western part of the State, consequently much the larger portion of the risks are in the West, very many of which are in the country.

The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President.*
S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney.*
PETER ADAMS, *Sect. & Treasurer.*
W H CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf.

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assured for life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $30, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

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All losses are paid within 90 days after satisfactory proof is presented.

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WM. D HAYWOOD,	WM. D. COOKE,
JOHN G WILLIAMS,	R. H. BATTLE,
H W HUSTED,	WM H. JONES,
WM. H. MCKEE,	P F. PE CUD
CHARLES B. ROOT,	SEATON GALES.

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WILLIAM D. HAYWOOD, *Vice President,*
JAMES F. JORDAN, *Secretary,*
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WILLIAM H. MCKEE, M. D. } *Board of*
RICH'D. B. HAYWOOD, M. D. } *Consultation.*

R. H. BATTLE, } *Executive Com-*
W. W. HOLDEN. } *mittee.*
CHARLES B. ROOT, }

Communications should be addressed, (post paid) to JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA
MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

DIRECTORS:

J. B. G. Roulhac, Raleigh.
Henry D. Turner, do.
J. R. Williams, do.
T. H. Selby, do.
C. W. D. Hutchings, do.
James F. Jordan, do.
James M. Towles, do.
James E. Hoyt, Washington.
Alex. Mitchell, Newbern.
Joshua G. Wright, Wilmington.
John M. Jones, Edenton.
W. W. Griffin, Elizabeth City,
F. F. Fagan, Plymouth
W. N. H. Smith, Murfreeshoro'.
H. B. Williams, Charlotte.
Geo. A Smith, Milton.
O. F. Long, Hillsboro'.
Joseph White, Anson County
Josh Boner, Salem,
A. T. Summy, Asheville.

OFFICERS OF THE COMPANY.

J. G. B Roulhac, *President.*
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*

John R. Williams, }
T. H. Selby, } *Executive Committee.*
C. W. D. Hutchins, }

This Company has been in successful operation for more than 7 years, and continues to take risks upon all classes of property in the State, (except Steam

Mills and Turpentine Distilleries,) upon favorable terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Country risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured

The average cost of Insurance upon the plan of this Company has been less than one third of one per cent. per annum, on all grades of property embraced in its operations.

All communications in reference to insurance should be addressed to the Secretary, post paid.

J. C. PARTRIDGE, *Sec'y.*

Raleigh, Jan. 9th, 1855.

Warrenton Female Collegiate Institute,

WARRENTON, N. C.

THE 30th session of this school will commence on the 3d of January next, prepared to give thorough instruction in all the branches of female education. Pupils received at any time. All charges from time of entrance.

Terms per Session:

Board, washing, lights and fuel in rooms,.....$60 00
English tuition,.....12 50
Music on Piano, Guitar, Melodeon, with use of instrument, each.....23 00
Oil Painting,.....15 00

Persons wishing further information, will please apply to GRAVES, WILCOX & CO.

December, 1855.

THE LAWTON BLACKBERRY.

HAVING accepted from Mr. Lawton the agency for this remarkable Fruit we are prepared to furnish plants at the following rates.

Half a dozen plants. $3.
One dozen plants. $5.
Fifty plants. $15.
One hundred plants. $25.

Carefully packed and shipped from New-York without extra charge.

The money must accompany the order.

C. M. SAXTON & &O.,
Agricultural Book Publishers.
140 Fulton-st., N. Y.

April, 1856.—1t.

AYER'S PILLS,

A new and singular.y successful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousness, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but effectual Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the hearses all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characteras to forbid the suspicion of untruth.

Among the many eminent gentlemen who have testified in favor of these Pills, we may mention:

Dr. A. A. Hayes, Analytical Chemist, of Boston, and State Assayer of Massachusetts, whose high professional character is endoraed by the

Hon. Edward Everett, Senator of the U. S.

Robert C. Winthrop, Ex-Speaker of the House of Representatives.

Abbott Lawrence, Minister Plen. to England.

† John B. Fitzpatrick, Cath. Bishop of Boston.

Also, Dr. J. R. Chilton, Practical Chemist, of New York City, endorsed by

Hon. W. L Marcy, Secretary of State

Wm. B. Aston, the richest man in America.

S. Leland & Co., Propr's of the Metropolitan Hotel, and others.

Did space permit, we could give many hundred certificates, from all parts where the Pills have been sued, but evidence even more convincing than the experience of eminent public men is found in their effects upon trial.

These Pills, the result of long investigation and study, are offered to the public as the best and most complete which the present state of medical science can afford. They are compounded not of the drugs themselves, but of the medicinal Virtues only of Vegetable remedies, extracted by chemical process in a state of purity, and combined together in such a manner as to insure the best results. This system of composition for medicines has been found in the Cherry Pectoral and Pills both, to produce a more efficient remedy than had hitherto been obtained by any process. The reason is perfectly obvious. While by the old mode of composition, every medicine is burdened with more or less of acrimonious and injurious qualities, by this each individual virtue only that is desired for the curative effect is present. All the inert and obnoxious qualities of each substance employed are left behind, the curative virtues only being retained. Hence it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

As it is ffequently expedient that my medicine should be taken under the counsel of an attending Physician, and as he could not properly judge of a remedy without knowing its composition, I have supplied the accurate Formulæ by which both my Pectoral and Pills are made to the whole body of Practitioners in the United States and British American Provinces. If, however, there should be any one who has not received them, they will be promptly forwarded by mail to his address.

Of all the Patent Medicines that are offered, how few would be taken if their composition was known! Their life consists in their mystery. I have no mysteries.

The composition of my preparations is laid open to all men, and all who are competent to judge on the subject freely acknowledge their convictions of their intrinsic merits. The Cherry Pectoral was pronounced by scientific men to be a wonderful medicine before its effects were known. Many eminent Physicians have declared the same thing of my Pills, and even more confidently, and are willing to certify that their anticipations were more than realized by their effects upon trial.

They operate by their powerful influence on the internal viscera to purify the blood and stimulate it into healthy action—remove the obstructions of the stomach, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wherever they exist, such derangements as are the first origin of disease.

Being sugar wrapped they are pleasant to take, and being purely vegetable, no harm can arise from their use in any quantity.

For minute directions, see wrapper on the Box.

PREPARED BY JAMES C. AYER.
Practical and Analytical Chemist.
LOWELL, MASS.

Price 25 Cents per Box. Five Boxes for $1.

SOLD BY

P. F. Pescud and Williams & Haywood, Raleigh, N. C. March 1855., 5—y.

NEW YORK STATE
AGRICULTURAL WORKS,

BY

WHEELER, MELICK & CO.

Double Power, and Combined Thresher and Winnower, in operation.

WE are Manufacturers of Endless Chain Railway Horse Powers, and Farmers and Planters' Machinery for Horse Power use, and are owners of the Patents on, and principal makers of the following valuable Machines:

Wheeler's Patent Single Horse Power,
AND
OVERSHOT THRESHER WITH VIBRATING SEPARATOR.

This is a One Horse Machine, adapted to the wants of medium and small grain growers. It separates grain and chaff from the straw, and threshes about 100 bushels of wheat or twice as many oats per day without changing horses—by a change nearly double the quantity may be threshed.– Price $128.

Wheeler's Patent Double Horse Power, and Overshot Thresher with Vibrating Separator.

This Machine is like the preceding, but larger, and for two horses. It does double the work of the Single Machines, and is adapted to the wants of large and medium grain growers, and persons who make a business of threshing.—Price $160.

Wheeler's Patent Double Horse Power, and Combined Thresher and Winnower.

(Shown in the cut.)

This is also a Two Horse Machine; it threshes, separates the grain from the straw, and winnows it at one operation, at the average rate of 150 bushels of wheat and 300 bushels of oats per day. In out door work, and for persons who make a business of threshing, it is an unequalled Machine.—Price $245.

Also Clover Hullers, Feed Cutters and Sawing Machines.

Our Horse Powers are adapted in all respects to driving every kind of Agricultural and other Machines that admit of being driven by Horse Power, and our Threshers may be driven by any of the ordinary kinds of Horse Powers in use—either are sold suparately..

☞To persons wishing more information and applying by mail, we will forward a circular containing such details as purchasers mostly want—and can refer to gentlemen having our machines, in every State and Territory.

Our firm have been engagod in manufacturing this class of Agricultural Machinery, 22 years, and have had longer, larger, and more extended and successful experience than any other House

All our Machines are warranted to give entire satisfaction or may be returned at the expiration of a reasonable time for trial.

☞Orders from any part of the United States and Territories, or Canada, accompanied with satisfactory references, will be filled with promptness and fidelity. And machines securely packed, will be forwarded according to instructions, or by cheapest and best routes.

WHEELER, MELICK & CO.,
ALBANY, N. Y.

APRIL, 1856. (1t.)

BORUM & M'CLEAN'S PAGE.

SCOTT'S "LITTLE GIANT" CORN AND COB CRUSHER,

PRICES REDUCED.

BORUM & M'CLEAN would call the attention of Farmers and others, to the fact that they have reduced the prices of the "LITTLE GIANT" CORN AND COB MILL, as follows:

$4 on No. 2; $5 on No. 3; $6 on No. 4; and that they have added to these three sizes, another size mill, designated as No. 1, and which they warrant to grind, with one horse, seven to eight bushels per hour, and this No. 1 Mill is offered, complete with levers, at the very low price of $30 *cash*.

Our prices and terms, therefore, for the future, will rate as follows for the different sizes:

No. 1 Mill "Little Giant" with one horse, grind 7 to 8 bushels per hour, $30 cash, $32 four months.
No. 2 " " " " " " " 10 to 12 " " " $40 cash, $42 " "
No. 3 " " " " two " " 15 to 18 " " " $50 cash, $52 " "
No. 4 " " " " " " " 20 to 25 " " " $60 cash, $62 " "

At these reduced prices every Farmer should buy a Mill, that will crush his Corn and Cob or Shelled Corn, which is much better to feed, and economical with all. No extra machine is required to drive these mills. The horse or horses are hitched directly to the lever attached to the Crusher. Any body can set one in motion, and during the few months they have been introduced thousands of them have been sold and they are considered durable and efficient machines.

BORUM & M'CLEAN,

Continue to manufacture every variety of Farming Implements, and their prices and terms will be found as favorable as those of any other dealer.

HORSE POWERS,
At $100 to $125 for 4, 6, and 8 horses, warranted good and durable machines.
THRASHING MACHINES,
Of the most approved style, at $45 to $80 each.
CORN SHELLERS,
Large, medium and small, at $8 to $60 each.
STRAW CUTTERS,
Of every variety $7 to $50.
CORN PLANTERS,
To plant from 6 inches to 3 feet, inclusive,
Warranted to work properly and correctly,
At $21.50 each.
Vegetable Cutters, Seed Sowers
Fanning Mills, of the best styles,
For all kinds of grain.

BORUM & M'CLEAN,

Also manufacture every variety of Plow, Cultivator, Harrow, &c., &c. 100 tons *Plow Castings* always on hand to fit the various plows in use.

Plow Screws of various lengths, for ditto.

Orders from responsible parties will receive prompt attention.

Catalogues furnished gratis; and all letters of inquiry answered promptly.

BORUM & M'CLEAN,

FARMERS' HEAD-QUARTERS,

11 Water-street, Norfolk, Virginia.

P. S.—They also have a full stock of American, English and Sweeds Iron always on hand.

April 1st, 1856.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. COOKE, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute* as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

EXECUTIVE OFFICE,
Raleigh, Jan. 26, 1856.

MR. WILLIAM D. COOKE has for some time been engaged in the preparation of a Map of North Carolina which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

DEAR SIR:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
WILL: A. GRAHAM.

January 26th, 1856.
WM. D. COOKE, ESQ.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly.*

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

N B.—The copartnership heretofore existing between W. D. Cooke and Samuel Pearce in the proprietorship of the Map has been dissolved by mutual consent.

WILEY'S NEW FORM BOOK.

A NEW AND PRACTICAL FORM BOOK, containing forms of all those Legal Instruments important to be known by the People of North Carolina and designed for the use of *Justices of the Peace, Sheriffs, Clerks, Constables, Coroners*, compiled and arranged by C. H. WILEY, Esq., to which are added Constitutions of North Carolina and of the United States. Published by Wm. D. Cooke, Raleigh, N. C.

Any person enclosing One Dollar in a letter, or that amount in Postage Stamps, will receive by return mail a copy of the work *free of postage. Be very careful to send for* "Wiley's New Form Book" and address
WM. D. COOKE, Raleigh, N. C.

April, 1856.

THE NEW HOTEL,

WELDON, N. C.,

IS NOW OPEN for the reception of visitors. This Hotel is new and newly furnished, and the Proprietors will use every effort to keep a GOOD HOUSE, and render their guests comfortable.

They respectfully solicit a share of public patronage.
T. J. JARRATT & Co.
Proprietors.

MEALS always ready on the arrival of the cars.
July, 1855. 33—tf.

WHITFIELD'S HOTEL

WELDON, N. C.,

JOHN SMITH, Jr., Proprietor,

Formerly of Charleston, S. C.

MEALS, FIFTY CENTS.

Left hand side going South—Right hand side going North.

August 18, 1855,

J. L. McDowell

THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher. B. S. HEDRICK, Agricultural Editor.

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Miscellaneous.

On the Proper time for Manuring.

The leisure of the past summer has occasioned several communications to you, drawn from the rememberance of many years of close attention to the general business of the cotton and corn plantation where the want of fertility had directed the attention very much to all possible aids from manure. Enclosing fields to be ungrazed, listing with the hoe and plow, and the hoe alone, and movable and stationary stock pens, littering with straw from the woods direct to the field and generally the usual practices of a farm where its wants were more than the means of supply for them; cotton seed very fully tried, rotted at the gin house in the usual way, and put on sound and uninjured also. I think success, having, due respect to the seasons, has much depended on deep plowing and late manuring. To this latter I shall confine my remarks and give the reason for my opinion, so that each may test its correctness by his own observation.

There is observable in all plants and animals a growing and bearing stage, and as the object you seek is the bearing or fruiting, the manure should be so applied as to be in its most powerful action, when the plant is in its fruition. This seems reasonable. Can it possibly be better to give all your manure to the cotton and corn when growing or when it is bearing, and this is too often the case. A short lived manure may be expended in giving growth to the stalk, and leaving nothing to make the ear. Cotton seed, early winter-rotted, is of this class, and if put on rotted at planting, its effects are all expended in the stalks with nothing left for the ears. The tendency of our warm climate is to run to too much stalk, and should be counteracted rather than stimulated. Our only friend that has been doing this is early drouth, always unthanked, and frequently regarded as an enemy. Corn will stand seasons that much diminish its size and yield well, provided suitable rains come when the grain is making. The manure should be so managed as to act at this juncture, say June and July. Let us take corn

for our example, and the season equally applies to cotton and all other products, and your observation will make the application. Corn is generally planted in March, and continues its growing stage through all May, when the bearing or fruiting stage commences and continues through June and July. The observant planter will then see the rapidity of the shooting and tasseling and pushing out the young ears, and if he takes the hoe he will see, just under the surface, innumerable thread-like white roots extending in all directions from the guard roots and others to the distance of eight or ten feet; then is the time that the land should be in fine order and the manure in its most powerful action. These roots are in search of food and bearing it to the corn, and should not be cut by plow or hoe, as it will be too late to renew for use.

In June and July it is in full bearing, and wants all the effect of the manure and rains, and on this, more than on the size of the stalk, is the yield dependant. All that class of manures that come from listing in and covering where grown the rubbish and surface soil, and the litter of stable and cow pens or compost heaps, as well from the want of time as the necessity of the co-operation of the earth in rotting, reducing and preparing it fo the food of plants, must be applied before the crop is planted, and let this be as present. The manures I particularly allude to are cotton seed, guano and the sulphates, all-powerful in themselves and requiring so little time in application, and I think I may add, of short duration, in the homœpathic dose usually given. The practice I complain of is the usual one of throwing out the cotton seed as it is ginned, where from the size of the bulk, it beats, sobs and its essence and value passes into the air and is lost. In this evaporation its odor tells the nose if it has not informed the understanding, that it is wasting into the air. It is, perhaps, correct to say that more than one-half its value is lost, and without the poor excuse of its being too busy time. Let the cotton seed be hauled off to the field to be manured before it accumulates into much bulk. In small heaps in the conical shapes as drawn from the wagons, it will not be injured by the winter rains. If you fear injury to your hogs or from your stock, a few rails adequately protect the supply for four acres, at once place; or it may be put into conical heaps as dropped from the wagon in an enclosure at the gin-house. The seed is to be killed after the corn is planted, and not before, and let some trusty hand, with eight or ten young people or other inferior hands under him, open the tops of the piles with two or more deep chops of the hoe, and the young hands pour in a bushel of water, more or less; on this let be placed two hoes full of dirt to retain the moisture, and cover it with the seed. In this state, especially if done at a rainy time, it will soon heat and the vegetitating principle be killed, which is generally the case in three or four weeks. This should be done in March or early in April, and the application to the corn in May, or when the corn is knee or waist high. It is well to scatter the seed in the furrow, near the corn, to be covered by the plows. Little benefit is got from sound seed, and while the covered seed is killed, much on the outer surface of the heap will not be, and this is better secured at the time of killing, to draw earth over the seed, as it better keeps the heat in. The effect of this manure will be visible after the first rain, and will be most powerful when the corn most needs it....

The object is to wet well the interior of the pile and keep its moisture there by the dirt, and don't let it be a mere plantation order, but see that it is done well, as it has as much use as any other work. Sound seed looses nearly all its value by sprouting, but is not so bad as winter-rotted seed. If the cotton seed piles are covered over by dirt, and the rain cases that dirt well, it keeps in the heat and kills the seed better. I have never succeeded in killing well the out-side seed.

I have only tried guano in the last two years, and put on an extensive scale, but so far as I have, I think it very valuable, and will more than compensate for its price. Until better informed, I shall regard it as a powerful short lived manure, and for plantation purposes, on corn, use about 100 pounds to the acre, scattering it in the plow furrow, to be covered when the corn is about knee high. Have it completely pulverized, as in lumps, however small, it must be too stimulating. I am not aware of the necessity of mixing it with charcoal ashes, plaster or other matter. It needs moisture to set it at work, and though it is said to act well on soils, I think clayey soils most suitable. Mexican guano is about one-third less in value

then the Peruvian; and of Peruvian it is more general to use 200 pounds to the acre. I think ten wagon loads of cotton seed will make more corn than ten loads on one acre, and for the same reason I prefer 200 pounds on two acres to all of it on one acre. It would extend this letter too far to repeat all that I have heard of the valuable effects of guano and the sulphates. —*Alabama Planter.*

Cultivation of Fishes.

In a paper from the Patent Office, published in the *National Intelligencer*, it is suggested that the fishes of many varieties not now known to them might be introduced into the waters of this country by means of transferring the spawn from one locality to another. The Mullet of the Garonne would be valuable in the Potomac, and also the Sardine. The trout and salmon of the Rhine and its waters would answer further north; turbot and sole for the Jersey waters, and trout, carp and salmon, for north of the Delaware. The carp, it is known, was introduced into the waters of the Hudson. The golden carp was introduced into a pond near the same river. The breaking of a dam caused these fish to be swept into the Hudson, where they now exist in tolerable abundance. To a similar accident we are indebted to its presence in the Schuylkill. Mr. Pratt used to have them in a pond on Lemon Hill, whence they were washed into the river, and are now caught by the boys in abundance. The smelt, now abundant in Jamaica Pond, near Boston, did not originally exist there, but was carefully transported either from Europe or from some section of this country.

Salmon and shad were formerly found in the Merrimac, and the latter in Winnepisceogee and its tributaries; but since the establishment of manufactories at Lowell, and the consequent daming of the river, these fishes have disappeared from all the upper waters; while, on the other hand, the opening of communication between Lake Erie and the Hudson had introduced to that lake and its accessories, eels and perhaps other fish not previously found there. The same result has also been experienced in Lake Ontario since its connection with Lake Erie by means of the Welland Canal. The officers of the Navy on foreign service could have assigned them the duty of collecting varieties of fish not known in the waters of the United States.

Mr. Peel of Saugerties, New York, has shad, carp, tench, gold fish, &c., in the ponds on his estate, and so well are they protected from molestation of every kind that upon the appearance of persons at the margin of the waters they approach to receive food from their hands. This gentleman, it is said, has a sturgeon, seven feet long, and when he wants a sail on his pond, he harnesses this sturgeon, attaching a line and cork float to the traces. The sturgeon will swim with the utmost speed around the pond several times, keeping near the shore.—Then he will suddenly stop, rise to the surface of the water and turn upon its back, thus indicating its exhausted condition.—*Philadelphia Ledger.*

Cheap Oil for Kitchen Lamps.

We find the following, says the *New England Farmer*, in an old almanac, and think that if it will operate as stated, it would be of some consequence in our domestic economy.—To keep a good light at the present high price of oil is quite an item of expense, and any suggestion that will put us in the way of reducing that expense, and of obtaining a good light at the same time, is worthy of consideration. Oil that could be purchased five years ago for $1.25 per gallon, now sells at $2, and the dirty whale oil that was then considered unfit for the most common use, is selling now at eighty or ninety cents, and even one dollar a gallon:

"Let all scraps of fat (including even whatever bits are on the dinner-plates) and all drippings, be set in a cold place. When the crock is full, transfer the fat to an iron pot filling it half way up with fat, and pour in sufficient cold water to reach the top. Set it over the fire, and boil and skim, till the impurities are removed. Next pour the melted fat into a large broad pan of cold water, and set it away to cool. It will harden into a cake. Then take out the cake, and put it away in a cool place. When wanted for use, cut off a sufficient quantity, melt by the fire till it becomes liquid, and then fill the lamp with it, as with lard. It will give a clear light, quite equal to that of lard, and better than whale oil, and it costs nothing but the trouble of preparing the fat. We highly recommend this piece of economy."

Food for the Sick.

Always have everything you use very sweet and clean, as the senses of taste and smell are very sensitive in sickness. Never cook articles for the sick over a smoke or blaze, as you will thus impart a smoky taste. When the mixture is thick, stir often to prevent burning.—Be very careful, in putting in seasoning, not to put in *too much*, as it is easy to add, but not to subtract.

The nicest way to flavor with orange or lemon peel is to rub loaf sugar on the peel till the oil is absorbed into it, and then use the sugar to flavor and sweeten. Herbs and spice, when boiled to flavor, should be tied in a rag, as they will not then burn on the vessel at the edges.

Always have a shawl at hand, also a clean towel, a clean handkerchief, and a small waiter, when you present food or drink. Many of the articles for deserts and evening parties are good for the sick.

An excellent Relish for a Convalescent.—Cut some codfish to bits the size of a pea, and boil it a minute in water to freshen it. Pour off all the water, and add some cream and a little pepper.

Split and toast a Boston cracker, and put the above upon it. Milk and a little butter may be used instead of cream.

Ham or smoked beef may be prepared in the same way. For a variety, beat up an egg and stir it in, instead of cream, or with the cream.

These preparations are also good for a relish for a family at breakfast or tea.

Several Ways of Preparing Chickens for the Sick.—Chicken tea is made by boiling any part of the chicken, and using the broth weak with only a little salt.

Chicken broth is made by boiling the chicken a good deal, and skimming very thoroughly and seasoning with salt. A little rice or pearl barley improves it, or a little parsley may be used to flavor it.

Chicken panada is made by pounding some of the meat of boiled chicken in a mortar with a little broth, and also a little salt and nutmeg. Then pour in a little broth and boil it five minutes. It should be a thick broth.

Milk Porridge.—Make a thin batter with Indian meal and wheat flour, a spoonful of each, and pour it into a quart of boiling milk and water, equal portions of each. Salt it to the taste. Boil ten minutes.

Rice Gruel, and Oat-Meal Gruel.—Make a thin paste of ground rice or Indian meal, and pour into boiling water, or boiling milk and water. Let the rice boil up once, but the corn meal must boil half an hour. Season with salt, sugar, and nutmeg. A little cream is a great improvement.

Arrowroot and Tapioca Gruels.—Jamacia arrowroot is the best. Make a thin paste, and pour into boiling water, and flavor with sugar, salt, and nutmeg. A little lemon juice improves it.

Tapioca must be soaked in twice the quantity of water over night, then add milk and water, and boil till it is soft. Flavor as above.

Wheat Gruel.—Tie half a pint of wheat flour in thick cotton, and boil it three or four hours; then dry the lump and grate it when you use it. Prepare a gruel of it by making a thin paste, and pouring it into boiling milk and water, and flavor with salt. This is good for teething children.

Another Panada. Boil a mixture of one-fourth wine, and three-fourths water, and flavor it with nutmeg or lemon. Stir in grated bread or crackers, and let it boil up once.

Herb Drinks.—Balm tea is often much relished by the sick. Sage tea also is good. Balm, sage, and sorrel, mixed with sliced lemon and boiling water poured on, and then sweetened, is a fine drink. Pennyroyal makes a good drink to promote perspiration.

Herb drinks must often be renewed, as they grow insipid by standing.

Other Simple Drinks.—Pour boiliug water on to tamarinds, or mashed cranberries, or mashed whortleberries, then pour off the water and sweeten it. Add a little wine if allowed.

Toast bread very brown, and put it in cold water, and it is often relished. Pour boiling water on to bread toasted very brown, and boil it a minute, then strain it, and add a little cream and sugar. Make a tea of parched corn pounded, and add sugar and cream.

Simple Wine Whey.—Mix equal quantities of water, milk, and white wine. Sweeten it to the taste.

A great Favorite with Invalids.—Take one third brisk cider and two-thirds water, sweeten it, and crumb in toasted bread, or toasted crackers, and grate on nutmeg. Acid jellies

will answer for this, when cider cannot be obtained.

A New Way of Making Barley Water.—Put two tablespoonfuls of pearl barley into a quart jug, two great spoonfuls of white sugar, a small pinch of salt, a small bit of orange, or lemon peel, and a glass of calf's foot jelly, and then fill the jug with boiling water. Shake it, and then let it stand till quite cold. It is best made over night, to use next day. When the liquor is all poured off, it may be filled again with boiling water, and it is again very good.

Arrowroot Blanc Mange.—Take two tablespoonfuls of arrowroot to one quart of milk, and a pinch of salt. Scald the milk, sweeten it, and then stir in the arrowroot, which must first be wet with some milk. Let it boil up once. Orange water, rose water, or lemon peel, can be used to flavor it. Pour it into moulds to cool.

How to Raise Osage Orange Hedges.

Preparation and Sowing of the Seed, Setting and Trimming the Hedge.

Preparation of the Seed.—Soak the seed in soft water, letting it stand in a warm room for two or three days, changing the water every twelve hours, to prevent fermentation; then pour off the water and mix the seed with an equal quantity of sand, or fine sandy earth, in a shallow box or boxes, and let stand in a warm room, stirring it two or three times a day, *until the seed begins to sprout*, which it will do in from three to six days—observing to moisten it occasionally if it appears dry, and cover with an old cloth or other article to prevent evaporation.

Sowing the Seed,—when thus prepared, should be done about corn-planting time, or any other time in May, in this climate, when vegetation is brisk and the ground is in good order. If bad weather or other causes delay the sowing after the seed is about ready, keep it in a cool room, to prevent sprouting till ready to sow. Make the ground fine, and sow the seeds in drills or rows in the same manner as gardners do the seeds of beets or onions, bestowing similar care to keep the plants free from weeds during the summer. A quart of seed, if it does well, will produce from 8000 to 4000 plants; the usual price is 75 cts. to $1 per quart, or $15 to $20 per bushel. If the soil, season and culture are good, the plants will grow two or four feet high the first season, and be fit for setting in the hedge row when one year old. If the soil is not too wet or spouty, the plants may remain undisturbed over the winter; but if in a cold latitude, it is as well to ridge the earth up against the stems with a hoe or small plow, in the fall, to prevent their heaving out or killing with the frost. The tops are commonly killed nearly to the ground the first year, but that is no matter.

Preparing the Land for a Hedge, is a point that is too often neglected, and this is a frequent cause of failure. Where the soil is not naturally deep and good, *it must be deepened and enriched*, by spading or trench plowing, so as to form a bed of at least 16 inches in depth of good soil, with manure beneath, else it will be in vain to look for a thrifty growth, and much time will be lost in rearing the hedge. Of course, where the soil is already deep and rich, as on prairies and bottom lands, no enriching is necessary, and the depth need not be greater than ten or twelve inches. The breadth of ground prepared should be at least eight feet, (Mr. McGrew says ten,) or four feet on each side of the line of plants, which is to be kept stirred with a plow or cultivator for the first three years. Care must especially be taken that no board or rail fense is suffered to stand so near the hedge as to shade it, or prevent the ground from being cultivated on both sides. It will be remembered that the law in Ohio allows all road fences to be removed six feet on to the highway, (except in towns or cities,) for a sufficient length of time for raising a hedge.

Setting the Hedge.—Having the ground harrowed smooth and fine, and any inequalities leveled, stretch a line along the place to work by; then, by having the plants prepared by cutting off the tops within an inch of the collar, and shortening the tap roots about one-fourth, so as to leave them 7 to 9 inches long, then with a sharp *dibble* or instrument pointed with iron or steel, about twelve inches long and an inch and a half thick at the top, make holes along the line six inches apart, deep enough to receive the roots so that the tops will be just even with the surface of the ground; taking care as each plant is set, to press the earth firmly against the root, by inserting the dibble

into the earth about an inch from its side, and pressing it towards the plant. A little practice will enable any handy person to perform this work quite rapidly.

The proper distance apart for setting the plants for a hedge, has been a subject of some dispute, and we have with others thought that possibly six inches will be found too close for the greatest durability of the hedge. But if a wider interval is allowed, more care and labor is required to cause the plants to spread so wide and densely at the ground as to prevent the danger of gaps for small animals to pass through. It can be done, however, and we have seen a specimen of good hedge with the plants set one foot apart. It has also been supposed by some, that it was better to set the plants in a double row, instead of single, but this has been found a disadvantage rather than a benefit, and is now discarded by all experienced hedgers.

Care must be observed to protect the young hedge from injury by stock, by excluding animals from the field entirely, or by placing a temporary fence of poles or other materials along the line. Many hedges have been ruined be allowing cattle or horses to trample on the plants during the first year after planting. Remember also to stir the soil frequently with the cultivator, during the first two or three years, on each side of the hedge, and keep it clear of weeds, as you would a row of corn designed for a premium at the county fair.

Cutting down the Hedge.—One year after planting, if the season or soil was not very unfavorable, the plants will have several shoots each, from three to six feet in height, and these must all be cut off *quite down to the surface of the ground.* (If the growth, from a bad season or other cause, has been quite small, this cutting may be deferred till the following spring.) Each root will now throw up several strong shoots, and on rich soil, where the plants are vigorous, Mr. McGrew recommends that these shoots should all be cut off about the middle of June, within three inches of the ground, but we think on ordinary soils the growth will not be so strong as to render this cutting advisable before the next season, and the roots were strengthened by allowing the tops to remain when it can as well he done.

The second cutting should be down to within two or three inches of the first, (or the ground,) and here is where most person have erred heretofore. The shoots are so strong and numerous that the owner thinks it is a loss of valuable material to cut all off so close ; but experience fully proves that, to *spare the knife is to spoil the hedge.*

The third cutting should be done about the middle of June, (supposing the second was done in Spring,) or as soon as the young shoots are about two feet high. Take a pair of hedge-shears or a Dutch sickle, and cut all off even, to within three or four inches of the former cutting, or about six inches from the ground. This will cause a very dense growth of lateral, filling up the space between the plants and covering the sides with shoots and leaves quite down to the ground ; and in no other way but by this midsummer pruning can a perfect foundation be secured. The neglect of this point has been one chief cause of failure in former years.

The fourth cutting should be the following spring, down again to within 5 or 6 inches of the former cut ; and again in June give the *fifth cutting*, adding only about six inches more to the height, and taking care to give the hedge a proper shape—a wide base at the ground, shortening none but the longest of the lower side branches, and narrowing towards the top like a roof of a house.

Repeat the trimmings the next spring and mid-summer in the same way, only a little more height may be allowed each time, *if a perfect close base has been secured*—not otherwise. By the end of the fourth year, if on good soils, the hedge will be able to afford some protection, as well as present a beautiful appearance. In trimming now it should be given a handsome conical shape, the base about four feet in width, (afterwards to be increased to five feet,) and narrowing to the top like a sugar loaf; taking care to clip the sides as well as the top evenly at the spring and mid-summer prunings.

After the fifth or six year the growth of the hedge will begin to be much slower, so that one trimming each year will be sufficient—but this must always be sufficiently close to prevent the hedge from becoming too high and wide. A short brush sythe is found by most persons a convenient implement for trimming hedges ; but some prefer a good sickle, and others use a common corn cutter, with a straight blade about two feet in length, made quite sharp. With either tool the work can be done quite rapidly after a little practice. They have machines for triumming hedges by horse-power in some parts of Illinois.—*Indiana Farmer.*

From the American Agriculturist.

"What is Trenching."

Asked an intelligent merchant who has just moved into the country. Our first thought was, why, he ought to understand so simple an operation. Our second thought was, why, or how should he? and our third was, we'll describe the operation for his benefit and that of others in like circumstances.

The word trenching is often used indefinitely to signify any method of stirring the soil deeply, either with the spade or plow. Trenching, as used by gardeners, implies digging the ground deeper than a single length of the spade, and is termed "*true*" or "*bastard*" trenching, according to the method in which it is performed. True trenching consists in inverting the soil, placing the surface below the sub-soil. The following figure will illustrate the process.

Fig. 1.

a, b, c and d severally represent the ends of long trenches extending across the garden.

In the pot of ground represented by figure 1, dig out the earth two "spits" or spades deep from *t* and *a*, and carry it over to the right side of the plot. Next take out the depth and width of the spade from *b* and put it in the place before occupied by *a*. Then take up another spit from *c* and place it in *t*, over *b*, in the new position. Continue the process in the same manner, putting *d* in place of *c*; *c* in place of *b*; *f* in *e*; *g* in *d*, &c. The last trench upon the right side can be filled with the soil carried over from *t* and *a*.

Bastard trenching consists in stirring the soil two or more spits deep, without sinking the surface soil, and is performed as follows:

Take out the plot *t* and set it aside to the right, as before described. Then loosen the soil in *a* without moving it. Next set *b* over upon *a* and loosen up *c*. Continue the process in the same manner, putting *d* over *c*, loosening *e*, placing *f* upon it, and so on across the plot.

During the spading process, whether by the first or second method, manure may, and should be worked into both the surface and sub-soil. It is always advisable in bastard trenching to bury as deeply as possible a little of the surface soil, including weeds, &c.

Few soils, not before worked deeply, are in proper condition to admit of true trenching at first, since the sub-soil in *a*, *c* and *e* is not so well fitted for plants as the air-exposed surface soil. On this account we advise to practice bastard trenching first, for a year or two, or else to make the trenches *a*, *c* and *e*, only one-fourth or one-half a spit deep the first year, so as not to bring up too much of the "raw soil" at a time.

While on this subject we will illustrate briefly, the method of stirring the soil as deep as three lengths of the spade.

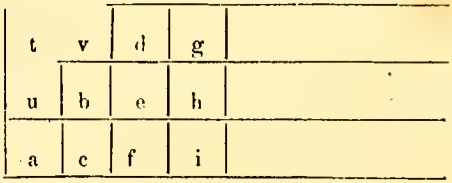


Fig. 2.

For *true* trenching, three spits deep, dig out *t*, *u* and *a*, and carry them to the right, as above. Then put *v* in place of *a*, *b* in place of *u*, and *c* in place of *t*, and so on, moving *d* to *c*, *e* to *b*, *f* to *v*, &c.

For *bastard* trenching, three spits deep, carry away *t*, *u* and *v*; then loosen *a*, working manure into it if need be. This done, set *b* in *u*, and *d* in *t*. We now have *d*, *v* and *b* vacant, and can continue the process by stirring *c*, putting *c* in *b*, and *g* in *v*, &c.

True and bastard trenching may be combined in three spits deep, thus: Remove *t* and *u*; loosen *a*; put *v* in *u*, and *b* in *t*. Then loosen *c*, and put *d* in *b*, *e* in *v*, loosen *f*, and so on. The process is very simple, is readily performed by the most unskilful workman after a little showing, and it is an effectual method of treating all garden soils. What sub-soiling is to the field, trenching is to the garden, only that the latter is more thorough and effectual, and gives an opportunity of applying manures to any part, either of the surface or sub-soil.

Few who have not tried it have any adequate idea of the productiveness and value of a soil thoroughly trenched. Such beets, and currants and parsnips, as will grow upon a soil worked and manured two to three feet deep, must be

seen to be appreciated; and the same may be said of all other vegetables, although they be not usually ranked as deep-rooted.

Give the roots of any plant a chance to grow downward, and they will go where they will always find moisture, no matter how hot or how long the sun may shine upon and parch a few inches of the surface.

Our advice in all cases would be, trench every foot of ground devoted to garden culture, at least two, if not three, or four spits deep. *It will pay*—IT WILL PAY WELL.—ED.

Cheap way for Dissolving Bones.

The fertilizing properties of bones have long been placed beyond a question. The great difficulty has been to make their fertilizing properties easily and cheaply available, by all persons engaged in agriculture, however limited their knowledge. In their natural state, bones cannot be rendered available for purposes of fertility, and it is in consequence of this fact that so many bones are turned to no practical account. The same objection does not hold against pulverized bones; but bone mills are not common, and if they were, I question whether one person in ten would avail themselves of their advantages. That bones can be dissolved by diluted sulphuric acid, is a well known fact; but, in consequence of the expense, trouble, &c., not one farmer in a hundred has ever thus effected their solution. Manufacturers have converted bones into superphospbate of lime, and, when honestly made, it is a valuable fertilizer; but its price, especially when carried far from the place of manufacture, will prevent its general use. The object of this article was to call attention to a cheap and sure way of rendering bones available for agricultural purposes, that every farmer might be induced to save those accruing upon his own farm, and turn them to valuable account.

A few years ago it was asserted that ashes would dissolve bones; but, on further trial, they were found to do so only imperfectly, and then only when crushed. Their value, when applied to clover, wheat and turnips, to pear trees, grape vines, and old pasture lands, is such as to render it desirable that they should all be turned to economical account.

When getting out manure, a year ago last spring, from my horse barn, I discovered several white, pultaceous masses, which, on examination, proved to be bones in a perfectly pulpy state. Their change could only be accounted for on the supposition that the horse manure had, by some unknown means, affected their disintegration. The thought occurred to me that this accidental discovery could be turned to good account. Accordingly, during the ensuing year, all bones from the kitchen were thrown into the manure heap constantly accumulating from the horse stable. Last fall that manure was removed to my orchard, and the bones used were all fresh, and hence I know nothing experimentally of the effects of horse manure upon old bones.

It is but just to observe that, since these experiments were made, I have seen a short article, detailing similar experiments, in some paper, copied from an exchange without name or credit. Hence, facts like the above may not be new to some of our readers, yet I trust the importance of the subject will justify a repetition.

O. C. GIBBS, M. D.

Frewsburgh, Chautauque Co., N. Y.

The Kitchen.

We will give to intellect, to immortality, to religion, and to all virtues, the honor that belongs to them. And still it may be boldly affirmed that economy, taste, skill and neatness in the kitchen, have a great deal to do in making life happy and prosperous.

Nor is it indispensably necessary that a house should be filled with luxuries. All the qualifications for good house-keeping can be displayed as well on a small scale as on a large one.

A small house can be more easily kept clean than a palace. Economy is most needed in the absence of abundance.

Skilful cooking is as readily discovered in a nicely baked potato, or a respectable johnny-cake, as in a nut-brown sirloin or a brace of canvass-backs.

A dirty kitchen and bad cooking have driven many a one from home to seek for comfort and happiness somewhere else.

Domestic economy is a science—a theory of life, which all sensible women ought to study and practice. None of our excellent girls are fit to be married until they are thoroughly educated in the deep and profound mysteries of the kitchen.—*Tenn. Farmer.*

To Crystalize Flowers.

The experiment is simple and can be tried without difficulty. Dissolve eighteen ounces of pure alum in a quart of soft spring water, (observing proportion for a greater or less quantity,) by boiling it gently in a close tinned vessel, over a moderate fire, keeping it stirred with a wooden spatula, until the solution is complete. When the liquor is almost cold, suspend the subject that is to be crystalized, by means of a small thread or twine from a lath or small stick laid horizontally across the aperture of a deep glass or earthen jar as being best adapted for the purpose, into which the solution must be poured. The respective articles should remain in the solution twenty-four hours; when taken out they are carefully to be suspended in the shade until perfectly dry. When the subjects to be crystalized are put into the solution while it is quite cold, the crystals are apt to be formed too large; on the other hand, should it be too hot, the crystals will be small in proportion. The best temperature is about 95 deg. of Fahrenheit's thermometer. Among vegetable specimens that may be operated on, are the moss rose of the gardens, ears of corn, especially millet seed, and the bearded wheat, berries of the holly, fruit of the slowbush, the hyacinth, pink, furze blossoms, ranunculous, garden daisy, and a great variety of others; in fact, there are few subjects in the vegetable world that are not eligible to this mode of preservation. The fitness of the solution for the purpose may be ascertained by putting a drop of it on a slip of grass, and seeing if it crystalize as it cools, if so, the solution is sufficiently strong. Then twist around a sprig of plant a cinder or wire ornament of any kind, some cotton, or still better, some worsted. After being immersed, as already directed, the surface of the whole will be found covered with beautiful crystalizations."

The effect of the above is very pretty; especially adapted to winter boquets.

Wash for Barns.—The Horticulturist gives the following as the best for this purpose:—Hydraulic cement, one peck; freshly slaked lime, one peck; yellow ochre (in powder,) four pounds; burnt umber, four pounds; the whole to be "dissolved" in hot water, and applied with a brush.

Coffee, its Cost and Culture.

It is believed by many that coffee can be cultivated in some of our Southern States as successfully as in Brazil, Java, and Jamaica; if so, it is high time that some of our planters were entering upon its culture, as it costs our country no less than $15,500,000 annually for the beans of this plant.

The coffee tree lives to a great age provided that the land is kept well drained. The tree begins to bear when three years old, and is at its full bearing when seven years old. The tree is allowed to grow in hight from six to seven feet; the top branches are pruned off when the tree is five years old, so that by the time it is seven it resembles a spread umbrella. Each branch droops downwards, and thus gives the pickers a good chance to pick the berry.—The coffee tree in Brazil bears two crops each year, the large crop in the spring, and the small one in the fall. The first crop is picked when the berry is red, resembling a cherry. The second crop is in general small, allowed to remain on the tree until fully ripe and dry. This crop, cured in the husk, is far superior in quality, and is called "pearl coffee." The blossom is beautiful, small, and tender. It remains on the tree from three to four days. If the weather is warm, with showers, during those few days, the crop is sure; if cool at nights, it often falls. When the berry is taken home from the field it is carried to a mill-house. The mill consists of three small rollers. The berry is put into a hopper, and a constant stream of water falls on the rollers during the time the mill is at work. By this process the outside hull is taken off and the berry is separated from it, and the coffee falls into a brick tank, where it is washed perfectly clean, and then put on a place covered with tile or brick raised in the center that the water may drain. It is then taken to the curing loft, where it is turned four times a day until the hull is crisp and dry.—Then by putting it through large fanners the inside hull comes off, and leaves the berry ready for hand-picking for market.—*Scientific American.*

A small piece of paper or linen, moistened with spirits of turpentine, and put into a bureau or wardrobe for a single day, two or three times a year, is sufficient preservative against moths.

Horticultural.

For the Carolina Cultivator.

Descriptive Catalogue

Of Peaches that have been tested by actual bearing, previous to and during the year 1855, *by* Joshua Lindley, *New Garden, Guilford County, N. C.*

[Continued from page 56.]

DESCRIPTION OF PEACHES—1855.

10. *Early Newington F.*—This is decidedly the finest peach that immediately succeeds the Early York. It is rather large, nearly round; color red, nearly all over—paler with marbled dots on the shade side. Its flesh is rich, very juicy, vinous and sweet. It is a good bearer, grows thrifty, and deserves to be cultivated more extensively than any other Early Newington. It separates from the stone with difficulty—even when fully ripe, and might be considered a cling. It has uniform glands and small flowers—and commenced ripening the 24th of July.

11. *Early Strawberry.*—A rather large freestone peach, of fine quality, rather streaked or blotched with red on a greenish white ground. The tree is a rapid grower, with globose glands and small flowers. Ripe 25th July.

12. *Palo Alto.*—A rapid, thrifty growing tree—and a beautiful red fruit, of rather large size and good quality—serrate leaves and small flowers. Ripe the 25th July.

13. *Walter's Early.*—This is a thrifty growing tree, and excellent fruit. It is of a pale greenish white ground, with a red cheek—flesh is rich, juicy and fine flavored, and ripens its fruit about the 26th of July. It has globose glands with small flowers, and deserves to be cultivated as one of the best that immediately succeeds the Early York.

14. *Large Red Nutmeg—or Brown Nutmeg.*—This I received as an early kind that ripened before the Early Anne—but it does not ripen till several days after it, and the Early York ripens, and being of a dwarfish habit, and rather thin bearer, and inferior in every respect to the Early York, it is not worthy of cultivation.

15. *Grosse Mignonne.*—This is a thrifty growing tree, with globose glands and large flowers, and it bears very young and most abundantly, so much so that the fruit must be thinned in full bearing seasons to enable it to ripen its fruit to perfection. The fruit ts rather large, mostly of a red color on a greenish white ground, and rather compressed in shape but nearly round. It is rich, juicy and fine flavored, and though described by all authors as one of the finest of all peaches, it does not yet come up to that high character with me.—But my trees are very young, and it may yet sustain its high character, when it arrives at mature bearing. At any rate it is one of the most hardy, young, and regularly productive kinds, and deserves to be extensively cultivated. Ripe 26th July.

16. *Large Mignonne.*—This fruit I received for the Grosse Mignonne, but its small flowers soon proved it to be incorrect. It is of rather large size, nearly round—with a red cheek. It is rich, juicy and excellent—with the flavor of roses. It does not bear full when young like the true Grosse Mignonne—but afterwards becomes a good bearer, and deserves to be cultivated for the fine quality of its fruit. Ripens with the other.

17. *Early Purple.*—This fruit I received for the Early Purple, but it proves to be identical with the Grosse Mignonne in its foliage, flowers and fruit.

18. *Downing's Sweet Water.*—This variety received as an early variety, to ripen eight days before the Early York. It is a nice white fruit of rather small size, and good quality. The tree is rather dwarfish in its growth—has globose glands and large flowers, and is very productive. But as it does not ripen till after the Grosse Mignonne, and all described before it it is of no value.

19. *Red Rare Ripe.*—This tree grows thrifty, with serrate leaves and small flowers. The fruit is rather large, rather oval, color red on the sun side, mostly with pale red marbled on

he opposite side—flesh rich, juicy and fine avored, and though it does not bear full when oung, it has the reputation of a good bearer, nd deserves to be cultivated entensively. Ripe nd of July.

20. *Red Magdalen*—This tree grows thrifty, has serrated leaves and small flowers. The uit is rather larger, rather more round, and f a deeper red color, and rather finer quality han the Red Rare Ripe. The tree is also of a ore thrifty growth, with deeper green foliage —and is also a much greater bearer when oung. Ripe at the same time. Thomas, in is work on fruits, differs from me with respect o these fruits. If I have them transposed, I ish to be corrected.

21. *Large Early York.*—This is a tree of the ost thrifty and rapid growth, with globose lands and small flowers. The fruit is rather rge, color mostly red on a pale greenish white round, the flesh is rich, sweet, juicy, vinous nd excellent. The tree bears thin when young, ut with mature age becomes a great bearer. t is highly worthy of extensive cultivation.— ipe twelve days after Early York.

22. *Large Orange C.*—This fruit I received or the Large Orange C. It resembles the Red are Ripe in all respects.

23. *Bergen's Yellow.*—A large oval fruit, yelow with a red cheek, and of fine quality. But he tree is a slow grower, and thin bearer. Ripe 8th July.

24. *White Imperial.*—A beautiful white fruit touched off with red on the sun side. It is f rather large size, nearly round form. The ee is quite thrifty, has globose glands and mall flowers, and ripens its fruit at the end of uly, and the fruit is sweet, rich, juicy and exellent.

25. *George 4th.*—This is a tree of the most hrifty growth, with globose glands and small owers, and is one of the best and most regnr bearers, and as far as my experience goes, ever overbears. The fruit is rather large, of early a round form, color a pale yellowish hite with a red cheek—flesh very rich, juicy, weet, fine flavored and excellent—being equald by few and surpassed by none. It is a each of the very finest quality, and is as it hould be, extensively cultivated. It usually pens its fruit from the 10th to the 15th of uly to the 1st of August.

26. *Bellegarde.*—This is a fruit of the finest quality, and the tree is thrifty and productive. The fruit is large, nearly round, of rather a dark red on the sun side, with paler marbled red on the shade side. It is rich, juicy, fine flavored and excellent—and scarcely surpassed by any other fruit. It has globose glands and small flowers, and is highly worthy of extensive cultivation—and the fruit ripens at the end of July.

27. *Montanbon, (Double Mountain.)*—This is a fruit of the finest quality—being of good medium siz —round form, of a greenish white color touched off with red next the sun—flesh rich, juicy, fine flavored and excellent. It has serrate leaves and large flowers, grows thrifty, is a great bearer, and deserves to be cultivated extensively. Ripe end of July.

28. *Coolidge*—This is a tree of thrifty growth with globose glands and small flowers —and is a great bearer. The fruit is of full medium size, round, greenish white with a red cheek. It is a fruit of good quality, but is rather acid with lack of richness and flavor. I may not have the true kind. Ripe e d of July.

29. *Noblesse.*—This is a large fine fruit of most excellent quality—and the tree is a thrifty grower, great and constant bearer. The fruit is large of a roundish, oblong form, of a pale yellowish white color touched off with some red stripes or blotches next the sun— the flesh is white, rich, juicy and fine flavored, being one of the best and most valuable of peaches, and deserves extensive cultivation. It has serrated leaves and large flowers, and ripens toward the end of July.

30. *Royal George.*—This tree I received for the Royal George or Red Magdalen, but its globose glands soon showed me that it was not the true kind. I have since received the true kind which I have described under its true ancient French name, Red Magdalen. But this I have continued to cultivate under the name of Royal George, as I have not yet been able to identify it with any other. It is a tree of the most thrifty growth, and one of the greatest bearers of any of the small flowers. The fruit is rather large, nearly round, of a nice red color on the sun side, and marbled with paler red on the shade side—flesh rich, juicy, fine flavored and excellent—it being one of the best, and is highly worthy to be extensively cultivated. Ripe end of July.

31. *Early Red C.*—This tree grows thrifty,

with serrated leaves and small flowers—fruit rather large, round, of a deep red color all over —flesh rich, juicy, and excellent; and the fruit annually ripens from the 10th to the 20th July. This is the best very early cling, a great bearer, and deserves extensive planting.

32. *White Newington C.*—This tree is one of the most thrifty growth with globose glands and small flowers; the fruit is large, round, of a yellowish white color, with some touches of red next the sun; flesh rich, juicy, and excellent; and though the tree does not bear full when young, it soon after becomes a great bearer in full bearing years. Ripe 20th to end of July.

33. *Early Admirable.*—This tree grows thrifty, has globose glands and large flowers —The fruit is rather large of a pale yellowish white color, with some light touches of red next the sun; flesh rich, juicy and fine. The tree is a great, sure, and hardy bearer, and may be cultivated profitably. Ripe 26th to end of July.

24. *Yellow Alberge.*—This tree grows thrifty, has globose glands and small flowers; the fruit is large, round, yellow, with a red cheek, the flesh is rich, juicy and fine. It is a good bearer, worthy of extensive planting, and ripens its fruit from the 26th to the end of July.

35. *Early Newington C.*—This tree grows thrifty, has serrated leaves, and large flowers. The fruit is of medium size, rather oval, of a pale yellowish whith color, with some touches of red next the sun; flesh rich, juicy and fine. It does not bear well when very young; but as it blooms very late, even after the latest frosts, generally, it may yet at mature age be a great and sure bearer, and deserve to be planted extensively. It ripens from the 20th to end of July.

36. *Resaca.*—This is a very thrifty growing tree, with globose glands and large flowers. The fruit is large, nearly round, of a pale yellowish white color, with a red cheek next the sun, frequently marbled with red on the shade side.—The flesh is rich, juicy, fine flavored and excellent, the tree bears well, and deserves to be cultivated. Ripe 26th to end of July.

37. *Yellow Rare Ripe.*—This is one of the largest and finest of our early peaches. The tree grows very thrifty has globose glands and small flowers. The fruit is large, of a round form, rather lengthened at the top; color yellow with a deep red cheek; flesh yellow, rich, juicy, sweet and excellent. The tree is rather a thin bearer only in full bearing seasons, but its large size and great excellence renders it worthy to be extensively propagated. Ripe 20th to end of July.

38. *Early Lemon C.*—This tree grows thrifty, bears abundantly, and deserves to be extensively planted as the earliest yellow cling. It is of large size, yellow with red next the sun—flesh rather rich, somewhat juicy, sweet and fine. Its leave have uniform glands and it flowers are small. It was raised from seed of the Lemon cling—is not equal to its parent—but ripens ten days earlier which renders it valuable. Ripe 20th to end of July.

30. *Stafford's Rare Ripe.*—A large and valuable fruit of the Red Rare Ripe class. The tree grows thrifty, has serrated leaves and small flowers, and bears well. The fruit is rather large, round, color mostly red on a greenish white ground; flesh rich, juicy, sweet and fine. It ripens from 15th to 20th July.

40. *Monterey.*—This is one of the most magnificent of our early peaches. The tree grows thrifty, has uniform glands and small flowers. The fruit is large, nearly round, of a deep red color, on a pale greenish white ground. Flesh rich, juicy, sweet, vinous and excellent, is a good bearer, and one that deserves to be extensively cultivated. Ripe toward the end of July.

41. *Flushing.*—This tree grows thrifty, has uniform glands and small flowers. The fruit rather large, of a roundish oval form, of a pale yellowish white color, a little touched with red. Flesh rich, juicy, sweet and excellent, it being one of the finest and one of the most productive kinds, and is highly worthy to be cultivated.—Ripe 26th to the end of July.

42. *Orange F.*—This is rather a large fruit, a roundish oval form, with a long point at the top, color pale yellowish white, with some touches of pale red; flesh rich, juicy and fine.—The tree grows thrifty, has globose glands and small flowers, is a great bearer and may be profitably cultivated. It ripens about the 1st August.

43. *Hyslops C.*—This tree grows thrifty, has globose glands and small flowers. The fruit large, round, mostly of a red color on a white ground. The flesh is rich, juicy and excellent. Prince says that this fruit is to New England what the Heath C. is to Virginia. Here it ripens at the end of July and first part of August.

44. *Early Crawford.*—This is one of the most popular early peaches. It is a beautiful

each when at perfection, and also one of excellent quality, and it is also a great bearer. It is large, of a rather long form—color yellow, with a red cheek—flesh rich, juicy, and very good—but not of the highest quality—but still it is a superior peach, and from its hardy character and great bearing, deserves to be extensively cultivated. The tree grows thrifty has globose glands and small flowers, and the fruit generally ripens from the 26th to the end of July.

25. *Vanzant's Superb.*—This is a tree of very thrifty growth, with globose glands and small flowers, and is a good bearer. The fruit is rather large of a slightly lengthened form, color pale greenish white with a marbled red cheek next the sun. Flesh rich, juicy, high flavored and excellent—it being one of the best that immediately succeeds the George 4th. Ripe toward the end of July.

46. *Barrington.*—This is a moderately thrifty, regular growing tree, with globose glands and large flowers. The fruit is rather large, a little lengtened, of a pale greenish white color with a dull brownish red cheek—flesh rich, juicy, fine flavored and excellent. The tree inclines to spread low, and is one of the hardiest, sure, and abundant bearers, giving us a crop of fruit when almost all others fail. It ripens the last of July to 10th of August.

47. *White Blossom.*—A beautiful pale yellowish white fruit, of medium size—flesh rich, juicy and fine, and ripens its fruit end of July. It has uniform glands and large flowers, and bears well.

48. *Snow.*—Very similar to the White Blossom in every respect, only rather larger and ripens near a week later, and has small flowers. It is a great bearer.

49. *Monstrous F.*—A large peach of good quality. The tree grows thrifty, has globose glands and large flowers, and is a great, early and constant bearer, color pale yellowish white with a dull red cheek. Ripens 1st of August.

50. *Admirable F.*—A tree of very thrifty growth with globose glands and large flowers. The first is large, round, of a white color with a red check next the sun—flesh rich, juicy, fine flavored and excellent, and the tree is a very good bearer, one of the best of peaches, and deserves to be largely cultivated. Ripe end of July to 10th of August.

51. *Belle de Vitry.*—This peach appears to be nearly the same as the Admirable. The fruit is perhaps a little more lengthened, and a little later than the Admirable in ripening.

25. *Harper's C.*—This tree grows thrifty, with serrated leaves and small flowers. The fruit is large, nearly round, color yellow with some red next the sun—the flesh is rich, juicy and fine, and it bears well, and ripens toward the end of July.

53. *Brevoort.*—A tree of thrifty growth with globose glands and small flowers. The fruit is white, with a red cheek next the sun, not quite round, but rather lengthened in form, of medium size—flesh rich, juicy, vinous and excellent. It is a good bearer, but rather too small for cultivation for a market fruit. Ripe middle of August.

54. *Large Rare Ripe—Morris' Red.*—This is a thrifty growing tree, with globose glands and small flowers. The fruit is large, nearly round, of a pale greenish white color, with a red cheek next the sun. It is rich, juicy and fine, and a good bearer. Ripening the first half of August.

55. *Lemon C., Pineapple C.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large, nearly round, but slightly lengthened; color yellow, with a deep red cheek next the sun. The flesh is rich, juicy and fine flavored, and the tree bears well. This fruit is very popular and deserves to be so. It ripens early in August.

(To be continued.)

CABBAGE WORMS.—John Farrar, one of the most practical farmers in the State, says, these destructive insects may be destroyed in the following easy and simple way:

"Break off a large leaf from the bottom of the cabbage, and place it on the top, upper side down. Do this in the evening and in the morning you will find near or quite all the worms on each cabbage have taken up their quarters on this leaf. Take off the leaf and kill them or feed them to the chickens, and place the leaf back if there be any more to catch."

BUGS ON MELONS.—Bugs may be kept from melons, cucumbers, and squashes, by setting boxes over them, six to ten inches high, and open at both ends. Bugs fly from vine to vine, in a horizontal direction, hence the boxes are generally an obstruction, and they pass by them. It is said that these frames with mill-net drawn over them answer as good a purpose for forwarding early vegetation, as frames covered with glass.

From the American Agriculturist.

Pruning Fruit Trees.

In the present state of horticultural knowledge it is about as important to tell the owner of an orchard, seasonably, what he should not do, as what he should. Much skill as it requires to plant a tree, it requires still more to prune it so as to help its growth and fruit bearing. Fortunately for the nursery-men, there is so little skill in planting, that a majority of the trees removed from the nursery never call for pruning. The sunbeams of their first season remove every redundant twig with a thoroughness that the most rabid pruner might envy A small sample of undersized bean poles is the autumn inventory of what went upon his plantation in the spring as a splendid lot of the choicest fruit trees, purchased at one dollar each. These of course will not want further pruning. But you have an old orchard, with some dead limbs and a thick, heavy growth of sprouts, and so much top that there is no chance for the sun to get in to ripen the fruit, what is to be done with it? Do not infer that because you have a keen edged knife and a sharp saw, that the best use you can make of them is to go into the apple tree tops with them in April. The truth is, February, March and April, are the worst three months in the year for this purpose. Lay your pruning tools upon the shelf for the present, and walk with us to your neighbor's orchard. You see that many large limbs were removed, and that the old wood is now nearly as black as if it had been painted, and that a long black stain extends far down the amputated limb, greatly injuring as well as disfiguring the bark. Examine the wood closely and you will find it has already begun to decay. The whole tree has received a shock by this untimely pruning, and years will not repair the injury.

The best time for a general pruning is at the close of the first growth of summer, which is from the 15th of June to the 15th July. Then the leaves will take care of the flowing sap, and all small wounds will be rapidly healed over. The large wounds may be closed by a coating of tar, thickened with brick dust, applied warm. Gum Shellac is good, but is more liable to peel off than the tar mixture.

Never cut a limb for the sake of using your tools. The tops of apple trees do not require severe thinning in our hot summers. Nature understands the wants of the tree often much better than the gardener who has had his training under the dripping skies of England. The thick limbs and foliage are needed to protect the trunk, the larger branches and the fruit.—You will find your fairest specimens in the top of the tree, and partially shielded from the sun's rays by leaves. Very small limbs, a half inch through, that cross each other or that interfere with the symmetry of the top, may now be removed, but no general pruning should be attempted.—Ed.

Transplanting Evergreens.

"What is Home without a" Shade Tree.

Editors Southern Cultivator.—So much has been said and written on transplanting shade trees, that even at the risk of being considered green, I must say a few words on putting out that most beautiful of all evergreens, the Cedar.

In the first place be sure that the tree is not dead before you put it out, for it is quite essential that it is a live tree on which you are expending your labor. If you purchase from negroes in the streets you may be certain that you have lost just the amount paid out. The better way is for you to see the trees taken from the ground; but if this is not convenient, send a trusty servant, with particular instructions that no tree be pulled up, but every one carefully taken up with the spade; and if they have to be brought any distance, let the roots be protected from the sun, not forgetting, when they arrive, to cover them well with earth if you are not ready to commence planting.

It is bad policy to keep a tree out of the ground any length of time. Examine every tree, and all those found to have any injured roots should be carefully pruned in proportion to the injury the roots may have sustained, keeping in view the future appearance of the tree; let all the bruised roots be also removed with a sharp knife. The next thing in order, is the making of the holes. These should be sufficiently large to allow the roots perfect freedom, for if you have to bend them to make them fit, you might as well prepare tomb-stones for your trees. Now, in setting your tree, be sure that you do not put it deeper than it grew in the woods. In filling the hole, I throw in a few spades full of sand, on the side of the tree—

ear this, I put the same quantity of rotted egetable manure, finishing with the surface oils taken from the hole, pressing the whole gently with the foot. A little water thrown in before you commence pressing will be of some benefit. When the hot season sets in, you must give frequent watering. A heavy coat of pine straw around the tress at this season must not be neglected. I have pursued the method recommended for several years and have never failed, but no negro can set out a tree for me. I have planted Magnolias, Hollies, and other trees supposed to be "hard to make live," with the same success. The present is a good time to put out Cedars.

Respectfully,

V. LA TASTE.

Cedar Green, Ga., March, 1856.

The Strawberry.

BY R. G. PARDEE.

This is the earliest, and one of the most delicious and wholesome fruits. It is also so easily cultivated as to be clearly within the reach of all having a few yards of soil—twenty feet square being all that is required to furnish a small family with an abundance. Why, then, we are asked, are they not more generally cultivated, and more efforts made to obtain the best varieties? We answer, the main reason is, that so much that is erroneous has been published, and the result has been so numerous failures, that multitudes have given up in despair, and declared it to be cheaper to buy than to raise this fine fruit. This result, too, has been reached when the fact remains, that strawberries of fine varieties have been and can be easily raised for fifty cents per bushel, besides the pleasure or labor of picking them. If this be so, and we do not doubt it, then it is apparent that three-fourths of all the labor and expense bestowed on strawberry cultivation is lost, and worse than lost.

Let us notice some of the errors which have led to such disastrous results; and 1st. We are told to fill the bed in the order of four rows of pistilates to one of staminates. The consequence of this putting staminates and pistillates in the same bed, has been, the strong and small bearing, rampant staminates crowd the full bearing, feeble pistillates out of the bed, so that after one season of tolerable productiveness, it proves a failure. It is generally conceded to be necessary to place the staminate varieties contiguous to the pistillates, but we would place them on opposite sides of the garden, some 30 or 50 feet apart, for all practical purposes, is as well as three feet. When all the runners are pertinaciously cut off, there is no evil resulting from allowing different varieties in the same bed, but this labor is so great we would never attempt it, and consequently be very careful to keep each variety distinct and separate from all others. 2d. We are told to prepare the beds with an abundance of well-rotted manure. This will produce very strong and vigorous plants, beds of sufficient size to produce five bunches of fruit will not yield even one quart during the entire season. The plant has been so high fed, so over stimulated, as to produce barrenness. On the other hand, we have often been suprised at the large crop of luscious Hovey's and Scarlets on soil so poor as hardly to raise corn. In one instance the hard pan from the bottom of a cellar, without the least addition, astonished every one with the large quantities of fine fruit.

We would prefer fair common soil, with a moderate addition of leaf mould and unleached ashes, to the richest garden soil and strongest manures for the strawberry fruit.

3d. Another common error is to permit the plants too closely to occupy the bed. The very large kinds should never be allowed to remain nearer than 12 inches apart, and the smaller varieties 9 or 10. If the plants are not wanted to set out or give away, throw them away. One plant, with plenty of sun and air, will overbear a dozen within the radius of a foot. The strawberry is a plant with a great number of fibrous roots, and is very tenacious of life. These numerous roots should not he cut off or greatly disturbed, unless we wish to maim the plant. True, those mained plants will bear some fruit, and may in a measure satisfy those who do not care to have a large crop, but such a course should not be recommended to others. Consequently good clean soil, free from weeds, should be selected, thoroughly and repeatedly pulverized, and then if mulched with tan-bark or saw dust, but few weeds will appear, and those can be taken with the hand, without a resort to that dangerus tool in a strawberry bed —the hoe, or even a spading fork, unless used with great care.—*Horticultural Review.*

Tree Planting.

We notice among the munificent bequests of Elliott Cresson, a legacy of $5,000 to be employed in planting in this gift. It is fragrant of good taste and friendly feeling. It seems to express gratitude for the comforting shade of some old tree under which the weary philanthropist had meditated his schemes of usefulness; and of considerate interest for the health and pleasure of future generations, who are to people the city of his birth. And when monuments of marble and of bronze shall crumble, the broad arms of the elm and the oak shall stand out against the sky as the befitting memento of the liberality and the last of the tree-loving Philadelphian.

Every one should plant trees. No object is more beautiful than a spreading elm, or a lively evergreen; none more productive than the apple or the luscious pear. Half the labor bestowed on a single crop of potatoes, would originate an orchard, the product of which in a few years would be equal in value annually, to the potato crop, yet with but little labor beyond the harvesting. A fortnight's toil in the spring or autumn, in transplanting choice fruit-trees to the roadside, or tastefully grouping them on the lawn, will ultimately add more to the value of the place than twice the time employed in building or fencing. For their own comfort, for the sake of their descendants, for the taste and improvement of the country, plant trees—let everybody plant trees.

The bald, naked church, tasteless, treeless! Who will have compassion on the worshippers, and surround it with trees? That district school-house, bare and unsightly; who will interest the boys in planting and protecting shrubs and trees that will make it an attractive and beautiful spot? Those verdureless villages, with their houses thrust upon the street—who will distribute honey-suckles, and Virginia creepers and prairie roses, that they may be turned into civilized habitations?

There is a softening, humanizing influence in horticulture and tree-planting, that we could wish were more general. There is too much danger of the gross and sensual and selfish in our national character; and while our reliance must be on religious and educational influence to correct this tendency, we believe that good and only good would come of the love for trees and flowers, and the cultivation of both. It may be blessed in leading the heart up to the love of the Rose of Sharon and the garden of God.—*American Messenger.*

The Asparagus Bed.

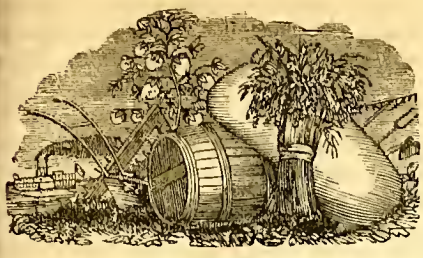
"How shall I get an asparagus bed?" asks one of our subscribers. We will try and give the information desired.

To begin with the beginning—the seed may be sown in autumn or early in the spring, in a good loamy soil. Select good and ripe berries, put them in water, and when slightly fermented, the seed can easily be washed from the pulp and dried. One ounce will grow a thousand plants. Sow in drills an inch deep, about one foot apart and cover with fine soil, pressed down lightly. Keep the weeds out, stir the soil often, and thin the plants to six inches apart in the drills. At one year old select the best and thriftiest plants to form your bed.

The asparagus bed should be open to the morning sun. And it is better if protected from the north and east, yet open to light and air. It should be very rich, and on this, more than any thing else, depends the amount and value of the product. Dig up a loamy, porous soil two feet deed, intermixing largely and thoroughly with manure to within six inches of the top; this should be filled with garden loam. Then take the young plants from the seed bed—injuring the roots as little as possible—and carefully set out in rows two feet apart, one foot apart in the row. Then cover the bed two inches deep with dark colored soil, made by a mixture of charcoal dust and muck, and sprinkle salt until the surface is white again. This will keep down the weeds and promote the growth of the asparagus, which, it should be remembered, originated on the sea-shore.

In autumn remove the dead stalks and cover the bed three inches deep with stable manure, to be forked in in the spring, with another dressing of salt. Let the stalks grow the first and second year without cutting, that the roots may get well established; the third year the asparagus will be fit to cut, and will, with similar treatment each fall and spring—with perhaps a slight addition of earth to prevent the roots from coming too near the surface—continue to yield well for many years.

Remember, room, a rich, warm soil, moist, but well drained, and salt enough to prevent the growth of weeds, are peculiarly beneficial to the asparagus plant. With these, and good care, one cannot fail to have that inmate of all gardens—an asparagus bed.—*Rural New-Yorker.*



The Carolina Cultivator.

RALEIGH, MAY, 1856.

Education of Farmers.

No one denies that farmers must be educated. But to what extent, by what means and in what manner is not so easy to determine.—And while every one is willing to agree that some mental culture is necessary, the notion is still too prevalent that much learning if not a positive hindrance, is at least of little benefit to the tiller of the soil. Now while we are obliged to admit that the greater number of those who cultivate the earth for a living cannot be expected to devote much time to the acquiring of knowledge, we must still maintain that learning, and that of the most extensive kind may do good service for all. The world is not rich enough at present to give every one the amount of education which is desirable. But how is it ever to become rich enough for that? Certainly not by keeping all at the same degree of intelligence. If there is to be a better condition of things, pioneers must be sent forward to explore the way. They can be prepared for their work only by making use of all the means at command, which if not found sufficient other and better must be provided.

A question which is now receiving special attention from thinkers is, what is the best education for farmers. No doubt there must be in the system of training some reference to the destination of the person to be trained. There is however danger that a system which should give nothing but what was essential to farmers would be too one-sided to answer any good purpose. If a man wishes to become a blacksmith he will endeavor to expand the muscles of the arms, but he will not neglect the development of the other limbs. And he will be a better blacksmith from having all his members expanded in fair proportion. The tailor who is to pass a large part of his time sitting cross-legged on his table might argue that it was useless for him to be able to leap or run. But let any one try to imagine a being who is nothing but a blacksmith, or nothing but a tailor, and he will have some idea of the defects of a system of education which might be devised to turn out only farmers, that should develope no parts of the body or mind except such as would be directly serviceable in cultivating the earth.—But while we must avoid one-sided exclusiveness in our plan, we must not go to the other extreme, and have no special object to attain by education. It is owing probably to this that it has become common to speak against the utility of a liberal education for those who are to be only farmers. The frequency with which such sentiments are uttered, shows there must be some ground for them. We must therefore grant, either that farmers are not benefitted by extensive learning, or that there is some defect in the learning that is offered. But who that has a correct notion of what is required to be a farmer in the highest sense of the term, will believe that education, and that of no limited degree, is both useful and even essential. Of course it is not meant that every one who works on a farm is a farmer. It may perhaps always be true that the larger part of mankind must toil with the hands, while a smaller number toil with the intellect. Education is necessary for both classes, but it will not be the same for each. We will first consider that which is proper for those who labor with the mind, and then that which is proper for those who labor with the body. Each class may be considered the servant of the other. That will be most honorable which best fulfils its part.

The learned professions of Theology, Medicine and Law, have always been more or less provided with suitable institutions of learning. Not only have strictly professional schools been maintained for them, but most of the colleges and high-schools are intended to prepare young men for the duties of these callings. Agriculture has always been so far separated from the usual walks of science, that it has not been thought necessary to make any special provision for it in the higher institutions of learning. With such institutions it is not surprising that

farmers should fail to reap the greatest advantage, or that they should not find the kind of of discipline best suited for their purposes. But if we examine into the true state of the case we think it may be shown that the systems of instruction which were best adapted to the wants of even the learned professions in the last century will have to be considerably modified to meet the requirements of the present day. And the changes demanded will be exactly of the kind which will bring these institutions to a condition to supply the wants of Agriculturists. So that Farmers, Doctors, Lawyers and Preachers, may all receive their early intellectual discipline at the same schools, and each rather benefited by being brought in nearer contact with the others.

The kind of change which we think is desirable may be best shown by considering the different requirements in the education of the minister at the present day, compared with what it was in former times. The preacher now finds his theological opinions assaulted from a new quarter. Hebrew, Greek, and Latin, are still necessary that he may not appear to disadvantage before scholars. Metaphysics, and Logic also still have their places. But these alone are insufficient. Geology, Botany, and Physiology are now as necessary to the defender of the faith as Hebrew and Greek. For where there is one that can feel the force of an argument which rests upon the critical interpretation of a dead language, there are fifty or a hundred persons that will understand an objection sustained by the facts of Geology, or the ingenious speculations of a book like the "Vestiges of Creation." When atheism arms itself with weapons of this kind, a Hugh Miller among the rocks and fossils, will render better service in the cause of true religion than the greatest critic or grammarian. The old "Red Sandstone," and "Footprints of the Creation," are as certainly religious books, as commentaries on difficult passages of scripture, or speculations on free will, destiny and fate. It is of no use for the preacher to say that the study of the sciences does not belong to him. He must know what is known by those he would influence by his preaching. When skeptics devoted themselves to Metaphysics and Scholastic Philosophy, ministers were obliged to pay attention to these studies. They need not be wholly abandoned now, but must occupy quite a subordinate place. The weapons of attack have been changed, those of defense must be changed also, or ground will be lost. Whatever may have been the case formerly, it will not answer for clergymen now to neglect the natural sciences. They will not serve as a substitute for other studies, but are quite as essential. If either must be omitted, it will not always be easy to determine which it shall be.

If the studies required of the minister have changed with time, it is also true of those of the lawyer and physician, though not to so great an extent with the latter. It may not be, perhaps, so easy to show that it is necessary for a lawyer to be well versed in Geology and Botany, but the other natural sciences, especially Chemistry and Physics must claim a considerable share of his attention. In fact it has often been remarked by the best lawyers, that no knowledge could be considered unnecessary to their profession. More particularly must this be the case when statesmanship is joined to law.

From what we have said it may be seen that we would not advocate a system of education, designed exclusively for farmers. Those intended for other purposes should receive the training and elementary knowledge which will enable them to enter upon the studies belonging especially to their calling. At the same time the system should be such that the most important interest of all, that of Agriculture will not be left unprovided for. As agriculture is the most important interest in the world, the education of those who are to manage it, ought to be one of the main objects of public instruction. Not only the elementary schools should be organized with this view, but also the Academies, High-schools and Colleges. It may be objected that this would eject the "learned professions" from all the higher seats of learning. This however need not follow. But instead of leaving out the chief interest of the country as has too often been the case, we would merely place it on an equal footing with other professions. Many of the studies pursued in our High-schools and Colleges are of such a character that they are necessary to all making any pretensions to a liberal education. Of this kind are the common English branches, a considerable part of Mathematics, Natural Philosophy, Chemistry, Geology, Moral Science, Rhetoric, &c., &c., sufficient to form quite an ex

tensive course. These studies might be pursued in common by all youths without reference to any particular profession. After this preparatory training each would take up the course of study best calculated to fit him for the special calling he is to pursue. These would be wanted, and they already exist; schools of Theology, Medicine and Law, and also, what does not at present exist in our country to any great extent, schools of Agriculture, Engineering, Mining, and of Arts and Manufactures. At present we have only to consider the special school for Agriculture. What shall be its scope and aim? Here we may with advantage take lessons from the schools already established for other professions, and for this purpose we will find the best models in those for Medicine. In all the leading medical Colleges we have "science with practice," just what we want to make good farmers. The studies pursued in an Agricultural School should be such only as are calculated to fit the student for his calling. Other objects will be attained incidentally, but the main purpose should be to teach what is useful and practical. The course of study should be extensive and thorough. It would not be necessary that all who enter should complete the entire course. But each ought to have it in his power to obtain as perfect an education as time, talents, or means will admit of. It is not however at all probable that a complete course of study can be established at once in any institution. With the limited means at command generally, it is best to begin with what is most needed, and then made additions as they may be wanted, and the means provided. This has in fact been the course adopted in several States. Professorships of Agriculture have been established in several Colleges both North and South. Most of these have been filled only a short time. But so far the move appears to be a good one. The changes which it has been necessary to make in the old established course of studying in order to make room for the new ones, are by some regarded with apprehension, lest by attempting to unite things incompatible with each other the result should be a failure. Thus it is sometimes maintained that the object of education is to discipline the mind, rather than to store it with knowledge. And in fact no one denies that the profit from patient, well directed study, is not limited to the amount of knowledge that may be acquired. But the difficulty is met by answering that the power to discipline the mind is confined to no single study, or to any course of study. Some things it is necessary to know in order to understand others, and therefore they cannot be dispensed with. But this is not the case with all the studies pursued by those who are obtaining a liberal education. Is it then indispensible that all should be kept beating along the same tract when the several ways of each lead in altogether different directions. If it is true, as we think it is, that the mind may be trained by the careful study of almost any subject, then there need be no fear that injury will be done to our institutions of learning by substituting studies of more practical utility for those which are less so.

But if it is found impracticable to give farmers a suitable education at the older institutions of learning, that is, if the studies of the latter cannot be so modified as to fulfil the demands of those wishing to become intelligent farmers, then the resort will have to be to new institutions established for this special purpose. In some States this will be tried as the preferable plan. Agricultural Colleges have been incoporated, and funds voted to them from the State Treasury. None of those institutions have however gone into operation, so that we can not speak positively of advantages which may be expected from them. We will hope that they will answer the purposes for which they are created, and bring a fair return for what they cost.

What may be done for the special benefit of farmers in the common schools of the country, we will consider at another time.

The Gravel Wall—Queries and Answers.

TARBORO', N. C., *March 22nd*, 1856.

EDITORS OF CULTIVATOR:—Your article in the February No. on the making of *Concrete* or gravel walls, is a most valuable one and I should like to see it followed up with some further suggestions. As Building of all sorts is a most expensive department not only of the Farmer, but every other occupation.

Your remarks are confined to a section of country where rocks of all sizes abound. In the low country there are none. Will not

Brick-bats answer as well as rocks, and will not blocks of wood or other pieces of useless wood, when entirely covered in with mortar, answer the purpose. If wood is thoroughly covered with mortar of lime, wont it in that state be preserved.

But the main enquiry is how to make the mortar or cement. How much lime to the quantity of sand, and what kind of sand? Must it be altogether sand, or some soil or clay? These enquiries are suggested by seeing in some chimneys and brick walls, that the mortar, by a few years or sometimes months, begins to decay and decompose or crumble out, while in other brick walls the mortar seems to harden with age, and becomes solid and permanent.

Now, if we could always succeed in making such mortar, the great object is attained, and gravel, or cement, or concrete walls, become at once *cheapest* and *best*—more convenient and lasting than timber.

On our southern coast, the United States Engineers build what they call concrete walls for fortresses and foundations of forts on the ocean, out of shells, bats, stone and mortar, and I see it suggested in the late American Farmer, that this cement mortar may be moulded into large blocks, which will harden into rocky masses, already shaped by the moulds without the chisel or the pick.

So, if we can only succeed in making the hard mortar, to what great and useful purposes it might be applied. I would be pleased to have the subject further investigated and discussed.

—

ANSWERS.

As we have had no experience in building the lime and gravel wall without using stones of both larger and smaller size, we can not speak positively about the comparative advantage of using it in a region where there are no rocks. A person who has always lived in a district where rocks abound does not commonly think of there being any place without them. And our correspondent will not therefore be surprised that in the former paper we said nothing about building with sand and lime alone. We intended at that time to give a statement of what we had actually done. We must however confess to an oversight in omitting to state more explicitly the proportions of lime and sand, and will therefore give it now. As stated the lime used was the Thomaston. One barrel was commonly slaked at a time, and made the quantity of mortar to be put up in a day. To each barrel of unslaked lime we put thirteen barrels of sand. We put up a part of the wall, using one barrel of lime to sixteen of sand. But our neighbors laughed so much at the weak mortar, that we thought perhaps there might be danger in using so small a quantity of lime. The wall made with the smaller proportion of lime was longer in becoming hard, but finally it became sufficiently hard, and we believe that for a wall twelve or fifteen feet high it would be sufficiently strong.

Mortar made in the proportion of one of lime to thirteen of sand is much weaker than that commonly used for laying brick. We will presently explain how it is that the mortar may be so weak and still become sufficiently hard.

To the question, "What kind of sand?" we can answer unhesitatingly *clean sand*, and rather coarse than fine. Clay if in any considerable quantity will spoil lime mortar, and yet it is sometimes put into mortar by those who ought to know better. Good clay by itself makes no mean mortar. But never put lime and clay together. By putting in a little clay the bricklayer or plasterer is able to work a poorer mortar, but the work will never be durable.

After seeing the hardness of our walls, some could scarcely believe that so small a proportion of lime had been used. One gentleman said he had had some plastering put up a short time before in which there was one part of lime to three of sand, "with a *little clay* to make it work well," and his plastering was not as hard as our wall. There is one thing about lime mortar, which although known to masons is not always attended to by them. If a weak mortar is used it should always be made some time before being worked up. It would not be a bad plan to keep it a month or more before using it. By that means the *shortness*, as it is called, will be prevented without a resort to clay in order to make it pliant. Some of the mortar which we made with one part of lime to sixteen of sand, after being kept for a few weeks and then rubbed over, was right "*greasy*," or "*soapy*" as the workmen expressed it. Those who have studied the subject properly, understand the reason of this very well. Fresh lime

and sand when kept in contact, in a moist state, act upon each other. The lime eats into the sand and unites with it, forming a chemical compound, the silicato of lime as it is called.—If the mortar is dried quickly after it is made this action is very much hindered. It is to prevent the sudden drying that brick are often wet before laying them. It is to this chemical compound of lime and sand that well made mortar owes its suppleness, and which makes it work so pliantly. And it forms the cement which joins together all the materials. When the lime and sand are kept in contact, in a moist condition, a smaller amount of lime will be sufficient to act upon the sand and form a cement. The quantity of lime we used would never have cemented the amount of sand put with it but for the length of time they were kept together before drying. The mortar was always made up the day before it was to be used. It was then put into the boxes. The boxes commonly remained on from three to five days, and occasionally even longer. And owing to the thickness of the wall it was three or four weeks before it became perfectly dry even on the outside. During all this time the lime had a fair chance to act upon the sand and stones and unite them in a solid mass. This slow drying has still another advantage. The whole of the lime never unites with sand. A part of it takes carbonic acid from the air, and is thus converted into lime stone. This process is aided by having the drying some what prolonged. We believe that with proper care in making the mortar with good lime and sand, one may always succeed in making a durable wall.—Whether the gravel or concrete wall shall become the *cheapest* and *best* will depend upon the cost of these materials. In many parts of the Eastern Counties they are abundant. To what extent lime could be made from the marls and beds of shells found there, we are not aware. But some of the specimens which we have examined, would make excellent lime.—Whenever larger stones are convenient, we would advise that they be used, but we do not consider them necessary. Lime and sand alone, would no doubt make a good wall. The only point which would offer any difficulty would be the obtaining a firm foundation. This is too often neglected. In building a wall with sand and lime it would be necessary to use some hydraulic cement with common lime, in the foundation. Say one barrel of cement to one of lime. With a good foundation there need be no fear of any wall well put up. It is a thing quite common to see brick walls cracked from top to bottom. This is always owing to the giving way of the foundation. For our own part we are quite partial to basement stories, or cellars. For they will always make it necessary to dig sufficiently deep to have firm ground. The objection to basements is that they can not be kept dry. This may be obviated either by having the house stand on ground that is inclined, so that there may be a drain lower than the foundation. And we consider this the best plan. Or by a free use of hydraulic cement, dampness may be prevented in any situation.

Where larger stones can not be obtained we would use shells if they were convenient, or brick-bats, if well burned would answer very well. And, in any part of the wall except the foundation, we have no doubt blocks of wood might be employed with safety, covering them as our correspondent suggests entirely with the mortar. At least we think it well worthy of a trial. Who will make the experiment?

Fruit.—A cultivator of fruit, whose good example is referred to in the New England *Farmer*, keeps a circle of several feet around the roots of every tree clear of grass, and enriches it with chip manure, bones, and several other kinds of fertilizing substances. He has very large crops of most excellent fruit, which, he states, brings him more money than any of the neighboring farmers obtain from all their crops.

Arrangements for the State Fair.—We are requested by the Executive Committee of the State Agricultural Society to state that Arrangements have been made with the Wilmington & Raleigh and the Raleigh & Gaston Railroad Companies, to convey persons to the next State Fair at half price, and to transport Articles, (one of each class) and stock to and from the Fair *free*. We are pleased to see this liberality on the part of these Companies, and hope their example will be followed by the other Railroads leading to Raleigh.

☞ See A. M. Treadwell's advertisement of Blooded Stock.

The Sweet or Carolina Potato.

We regret that the following communication was not received in time for our last number, so that our young and unsuccessful growers of this valuable esculent might have had the immediate opportunity of trying our correspondent's plan. But it is not too late to test a part of it the present season. As the proof of the pudding is in the eating, so it is with Potatoes, and to our knowledge the table of our correspondent is always set with the best. We hope to hear in good time about the digging and keeping of his favorite.

We would be glad to have information on the following points:

Of the different kinds of Sweet Potato, which is the best, and how many bushels is considered a fair average yield per acre.

For the Cultivator.

CHATHAM COUNTY, N. C., March 28th, 1856.

Messrs. Editors: Let me fill a small corner of your paper, on the culture of the sweet potato with some remarks, as I have had some experience in that business. In the the first place, after selecting good seed potatoes, they should be bedded in a warm sunny place—the ground prepared by stirring, made fine and manured with strong stable manure.—Then the bed should be a little elevated, the potatoes placed on the bed and pressed down; they may be laid quite close to each other.—Then let fine dirt be sprinkled over them until they are covered a very little. After which the bed should be covered with litter from the hen-house or stable; there should be a little ditch around the bed to take off the water. If there should be much wet it would be better to keep the rain off with boards or plank until the middle of April, after which they should have the rain and sun, and in dry weather be freely watered and the crust broke over them so the air and warmth may penetrate to the potato. As soon as the sprouts begin to come through the ground, there should be more fine dirt sprinkled over the bed so that they may have more root. As soon as the sprouts have sent out fine roots of their own, they are ready for transplanting, and the sooner it is done the better. Yet the second drawing is invariably the best. We think that is owing to the fact that they draw less nourishment from the mother potato, and so put out more roots of their own, being more dependent on their own resources, and can bear transplanting better. They may be transplanted in wet or dry weather; they do best in dry weather, but it takes more labor.—As soon as they are taken out of the bed let the roots be dipped in water, and then have dry dirt sprinkled over them, after which they may be put in the ground with a stick, or in a hole made with the corner of a hoe, then pour a small quantity of water around them, and as soon as that settles, place dry dirt around the slip which will prevent the sun from scalding them. They should be planted in the evening.

We will now speak of preparing the ground for potatoes. It should be broken in the fall or as early as convenient, and should be plowed several times before planting and fully pulverized. It may then be bedded up with a large plow, but do not plow up the clay. After that is done, let the top of the bed be levelled off a little, then put as much manure on the bed as is convenient. The more the better.—Then take a hoe and raise the bed by covering up the manure. The ground is now ready for putting in the slips, which may be done as above stated. After which there will be but little more required than to keep the ground loose and the grass and weeds out, until the potatoes are ready for use. The reason for putting the manure on the bed is there will be less vines and more potatoes than if the manure was put in the ground, deep. If I wished to raise vines I would put the manure in the furrow, and raise the dirt on it, for I should be sure to succeed, I will not say any thing now about saving them as that will be forgotten by digging time.

Yours very respectfully,

A CHATHAM FARMER.

Exchanges Received.

FRANK LESLIE'S "Gazette of Fashion and the Beau Monde," for April.

Also FRANK LESLIE'S New-York Journal for the month. Both of these are excellent and cheap publications which we have frequently commended.

"LE BON TON, JOURNAL DES MODES, and monthly Reporter of Paris, London and New York Fashions," for the month, L. T. TAYLOR N. Y.

PETERSON'S "LADIES' NATIONAL" for May a cheap and fashionable monthly.

GODEY for May, and ARTHUR'S HOME MAGAZINE, just received. The former is beautifully illustrated. The ECLECTIC for April contains some very interesting articles.

The AFRICAN REPOSITORY, is also on hand, an excellent monthly, devoted to the cause of the American Colonization Society.

The SOUTHERN LITERARY MESSENGER for April is marked with unusual variety and spirit.

New Music.

Messrs. WILLIAM HALL & SON have just published two valuable additions to the repertoire of American music, namely, the "Marche de Nuit" and the "Last Hope," by Mr. GOTTSCHALK. these compositions are of no ordinary kind. They are chaste and exquisite art creations, glowing with the genius of a master. The more such pieces are published, the more they will be studied, and the clearer will be the musical perception of the public. We hold it as a good sign of the times that these *morceaux* have been at once appreciated. Their publication is simply a demand and supply necessity. Messrs HALL have issued these two delightful works in a sumptuous manner. The typography is a perfect luxury,—so bold, clear and finished. The pictorial embellishments are also excellent. For the sake of true art, we hope these two publications will meet with the extended popularity they deserve.

☞ Look at our advertising columns this month. You may find something there which you need—Agricultural Books—Reaping and Mowing Machines—Farmers' Implements—Horse-Powers & Threshing Machines—Blooded Stock, &c., &c.

Miscellaneous.

Fresh Fruit in Hermetically Sealed Cans.

Public attention was very generally called to this subject last year by ARTHUR, BURNHAM & Co., of Philadelphia, manufacturers of "Arthur's Patent Self-sealing Cans and Jars," and large numbers of families all over the country were induced to try experiments, not only with Arthur's cans, but with a variety of other cans offered to their notice. Arthur's can, which is the simplest in construction and the easiest to use, is moreover the only one that we have ever seen, with a single exception, that is constructed on right scientific principles. In the exception referred to, the can itself is in all respects less desirable, and few would have any hesitation in choosing between them. Arthur's can is entirely open at the top, with a channel around the mouth, filled with cement. It is sealed by heating the lid and pressing it into this cement, which is done in a moment. The cement is in the channel when the can is sold.

We have thus particularly referred to Arthur's can, that our readers may know how to distinguish it from all others. It is, without doubt the best yet offered to the public, and in an article of this kind only the best should be taken. We have used them ourselves, and know their quality. So have scores of our friends. Mr. Godey, of the *Lady's Book*, good authority, as every one knows, thus speaks on the subject:

"There were a variety of Self-sealing cans offered to the public last year, and there will, in all probability be a greater number during the coming season. Not one that we have seen bears any comparison, in our estimation, with 'Arthur's;' and our advice to all is, to try no other can or jar next year. This one will certainly keep fruit precisely in the condition in which it is sealed up, is simple of construction, and easy of use, and cannot, we believe, be equalled, far less excelled, by any vessel got up for the purpose of keeping fruit in a fresh condition by hermetical sealing."

Messrs. Presbury & Billings, Proprietors of the Girard House in Philadelphia, speak with equal directness:

"We have used for some time, and are still using, both at the Girard and La Pierre Houses, Arthur's Patent Self Sealing Cans, for putting up fresh fruits, tomatoes, &., and find them, in all respects, admirably adapted to the purpose. They possess many advantages over all other Cans that we have seen. Having tried and proved them, we can speak confidently of their value."

We have before us a mass of testimony equally conclusive, but have not space for its admission.

Fruits put up in hermetically sealed vessels are, as all who have used them know, in every respect superior to those put up in the old fash-

ioned way. The process is, moreover, easier and cheaper. No housekeeper who has once tried the new method, will ever go back to the old. Messrs. Arthur, Burnham, & Co. may be said to have originated a new era in Fruit-preserving, by offering to every housekeeper the means of hermetical sealing; and they deserve to reap a rich reward.

We ought to mention, that besides cans made of tin, fire-proof yellow ware Jars of similar size and shape are manufactured under this patent. These last are a very neat and desirable article, and will be a favorite with housekeepers.

We have presented this matter a little prominently, because it is a matter in which almost every one has an interest. In calling attention to so admirable an invention, we but serve the common good.—*Philadelphia Merchant.*

Salt on Wheat.

Theodore Perry of Lacon, Ill., in the *Prairie Farmer*, says:

Having tried the experiment of sowing salt on wheat, I deem it my duty to give the result to your readers, and I hope it may be tested by others and their experience given through your columns. A field of ten acres was divided into equal parts and sown with spring wheat. After the wheat was well harrowed in, one bushel and a half of salt per acre, was sown broadcast on one-half of each parcel of ground. Soon after the wheat was up, its color distinctly indicated where the salt was sown, and the result was, that the wheat was ripe for the sickle five days earlier than the other portions of the field. Not a particle of scab or rust could be found, while that by its side was affected with both. The wheat in the several pieces was all stacked together so that we could not ascertain the increase of the yield; I judged, however, it was from four to five bushels per acre. The soil was sandy loam, and the field was so divided that in my opinion the test was satisfactory.

To Preserve Sweet Corn.—Gather the corn just as it begins to harden; boil as for the table; cut the kernels carefully from the cob; spread them to dry on a sheet or clean floor, and keep them thus till well dried; then preserve them in a dry, cold and even temperature till needed for use. Soak the corn a few hours, and boil till properly softened, and serve them to your taste.

Measuring Corn in Bulk.

Editors Southern Cultivator—I have a short rule for gauging, founded on correct principles (which I can satisfactorily explain, if any of the readers of the Cultivator desire it) and as I have never seen anything like it, perhaps it may be worth a little to some of your subscribers, so I will send it to you for publication. A neighbor of mine was cheated out of five barrels of corn, which would not have been the case had he been acquainted with the following simple

RULE:

Multiply the length, width and height together and then multiply that product by eight. Cut off the two right hand figures, the left hand period is the correct answer in barrels.

J. D. GUNNELLS.

Bold Spring, Ga., 1856.

The Merchant's Clerk and the Plow Boy.—The young man who leaves the farm-field for the merchant's desk or the lawyer's or doctor's office, thinking to dignify or ennoble his toil, makes a sad mistake. He passes, by that step, from independence to vassal-age. He barters a natural for an artificial pursuit, and he must be the slave of the caprice of customers and the chicane of trade, either to support himself or to acquire fortune. The more artificial a man's pursuit, the more debasing is it morally and physically. To test it, contrast the merchant's clerk with the plow-boy. The former may have the most exterior polish, but the latter, under his rough outside, possesses the true stamina. He is the freer, franker, happier, and nobler man. Would that young men might judge of the dignity of labor by its usefulness and manliness, rather than by the superficial glosses it wears. Therefore we never see a man's nobility in his kid gloves and toilet adornments, but in that sinew arm, whose outline, browned by the sun, betokens hardy honest toil, under whose farmer's or mechanic's vest a kingliest heart may beat.

Profits of Broom Corn.—A Virginia paper states that Mr. S. H. Owen, who recently purchased Winchester's Island, containing 80 acres, for $6,000, has realized half that sum for his crop of broom corn this season. Mr. Q. had

60 acres under cultivation, from which he realized 40,000 pounds of broom straw, and sold it at prices varying from $7,50 to $10 per hundred—averaging full $8. In addition to this, he gathered about 3,000 bushels of seed worth 25 cents per bushel, or $750 for the lot—or $4,000 for the produce of only 60 acres; which, deducting for cost of cultivation, leaves $3,000 net.

Domestic Hints.

Preparing Osage Orange Seed.—Isaac L. Stanley, of Rensselaer, Indiana, says, to prepare this seed for planting, "Tie it up in a bag and sink it in running water three or four weeks; if you have no running water, deposit in any vessel filled with cold water, taking care to change the water every day, to prevent fermentation." He thinks this is not generally known, and imparts it as having been proved to be a good plan, by two year's experience.—*Prairie Farmer.*

For the Cure of Croup.—A piece of fresh lard, as large as a butternut, rubbed with sugar, in the same way that butter and sugar are prepared for the dressing of pudding's divided into three parts, and given at intervals of 20 minutes, will relieve any case of croup, not already allowed to progress to the fatal point.

To Cure Hams.—When you are smoking your hams occasionally throw upon the fire a handful of China berries, and it will be found a preventive against skippers. So says a gentleman who has seen it sufficiently tested in South Alabama.

Pickle for Beef.—To one hundred weight of beef, four quarts of salt, two oz. of saltpetre, and one pint of molasses; mix in water enough to cover the meat.

Custard Pudding.—Beat up six eggs, add a quart of new milk, a little lemon peel shred fine, five or six bitter almonds blanched and grated, or crushed, and sugar to your taste; mix all together—then have ready your dish covered with a good puff paste, into which pour the custard; grate over it half a nutmeg and bake it, or put it into a basin without paste, tie a cloth over it and boil it. If it is boiled serve with melted butter.

In No. two of volume seventh, of Country Gentleman, C. W. F. inquires for a receipe for making crackers equal to the purchased article. For *soda* crackers, we know the following receipe will make crackers superior to any we ever purchased.

Recipe.—To 14 cups of flour, add one cup of lard, four teaspoonsful of cream tartar and two of soda. Rub these ingredients well into the flour, add three cups of water, work thoroughly, and bake quick.

Medical Impossibilities.

For a long time a certain class of diseases has baffled the skill and practice of the most eminent members of the regular medical faculty. Foremost among these we might instance epilepsy or falling fits. Happily now by the skill and inventive genius of an eminent chemist of Baltimore, Md., this disease has been brought within the means of a cure. We allude to the preparation called the *Vegetable Extract Epileptic Pills*, invented and prepared by Dr. Seth S. Hance, of 108 Baltimore street, Baltimore, Md. Since their discovery many persons who had given up all hope of ever being cured, have been restored to the full enjoyment of health. Prominent among these we might enumerate Mr. Harrison Lightfoot, of Huntsville, Alabama. Mr. L. has suffered as much from Epilepsy, as any other person in the world: never knowing what it was to pass a week without having an attack, and often falling in the streets of Huntsville. He is now fully restored and has not had an attack for more than a year.—Dr. Hance's Pills have been the sure cause of this cure. These Pills also cure all modifications of Fits, Spasms, Cramps, &c., and are very serviceable for persons of weak nerves.—Dr. Hance, sends them to any part of the country on the receipt of a remittance. Price, one box, $3; two, $5; twelve, $24.

Address SETH S. HANCE,
108 Balt. st., Bal., Md.

Invaluable Remedies.—Here are a few simple remedies for very prevalent disorders, which we have no hesitation in recommending as infallible:

For sea sickness—stay at home.
For drunkenness—drink cold water.
For health—take "Ayer's Pills."
For accidents—keep out of danger.
To make money—advertise in the Cultivator.
For Coughs and Colds—take Cherry Pectoral.
To keep out of jail—pay your debts.
To be happy—subscribe for a newspaper.
To please all—mind your own business.
To have a good conscience—"pay the printer."

Worms.

As this is the season of the year when worms are most formidable among children, the proprietors of M'Lane's Vermifuge beg leave to call the attention of parents to its virtues for the expelling of these annoying, and often fatal enemies of children. It was invented by a physician of great experience in Virginia, who, after having used it for several years in his own practice, and found its success so universal, was induced at last to offer it to the public as a cheap, but certain and excellent medicine. It has since become justly popular throughout the United States, as the most efficient Vermifuge ever known, and the demand has been steadily on the increase since its first introduction to the public.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa.** All other Vermifuges in comparison are worthless Dr. M'Lane's genuine Vermifuge also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

The Liver Pills.

The Liver Pills of Dr. M'Lane were first used by him exclusively in his own practice. So efficacious were they in all cases of Liver complaint, that they became famous, and attracting the attention of the medical faculty, passed into general use. They act with great certainty and regularity; the patient almost immediately feels the dispersion of his disease, and is gradually restored to health. With some the effect is almost miraculous, frequently experiencing immediate relief, after having for months resorted to drugs and medicines of another description, in vain. Diseases of the Liver are very common in this country, and are often frightful in character. Those who experience any of the premonitory symptoms of this dangerous and complicated disease, should at once procure a box of Dr. M'Lane's Pills, and perhaps, thereby, be saved a world of misery.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Liver Pills, manufactured by Fleming Bros. of Pittsburgh, Pa,** There are other Pills purporting to be the Liver Pills, now before the public. Dr. M'Lane's genuine Liver Pills, also his celebrated Vermifuge, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Table of Contents.

Arrangements for the State Fair,..... 85
Bugs on Melons..... 77
Cultivation of Fishes..... 67
Cheap Oil for Kitchen Lamps..... 67
Cheap way for dissolving Bones,..... 72
Coffee, its Cost and Culture..... 73
Cabbage Worms..... 77
Domestic Hints..... 89
Descriptive Catalogue of Peaches..... 74
Education of Farmers..... 81
Exchanges Received..... 86
Food for the Sick..... 68
Fruit..... 85
Fresh Fruit in Hermetically Sealed Cans,..... 87
How to Raise Osage Orange Hedges..... 69
Measuring Corn in the bulk..... 88
Medical Notices..... 89
New Music..... 87
On the proper time for Manuring..... 65
Pruning Fruit Trees..... 78
Profits of Broom Corn..... 89
Salt on Wheat..... 88
The Kitchen..... 72
To Crystalize Flowers..... 73
Transplanting Evergreens..... 78
The Strawberry..... 79
Tree Planting..... 80
The Asparagus Bed..... 80
The Gravel Wall—Queres and Answers..... 82
The Sweet or Carolina Potato..... 84
To preserve Sweet Corn, ... 88
The Merchant's Clerk and the Plow Boy, ... 88
What is Trenching..... 71
Wash for Barns..... 73

JOHN N. GORDON,

Grocer and Commission Merchant and Dealer in Metals,

14th Street, near the Exchange Hotel,

RICHMOND, VA.

May, 1856. 3.—tf.

TO THE FARMERS OF THE OLD NORTH STATE.

I OFFER FOR SALE THE FOLLOWING named Young Bulls bred on my farm at Madison, New-Jersey; all of them will be fit for service at twelve months old. They are of very fine size, in good condition, and are out of my best milking cows, by my *premium* Short Horn Bull Madison. "Morris" calved May 12, 1855. "Essex" July 29, 1855. "Victor" Sept. 15, 1855. I will deliver them in New-York city, and attend to shipping without charge for, "Morris"—Forty dollars, "Essex"—Thirty dollars, "Victor" (very fine) Forty dollars any time before the first of May.

The use of these animals would increase the size, and weight of your stock from one-fourth to one-third the *first* cross, and would also increase the milking properties of the Cows, very considerably. Farmers who will not incur the expense of a full blood male, will find this a rare opportunity to improve their stock without a heavy outlay—also.

For sale. A thorough bred Ayrshire Cow from imported Stock. Price one hundred and twenty-five dollars. Also ten Superior North Devon Cows full blood will calve in about six weeks one at $175, one at $250. Orders for stock promptly executed.

ALFRED M. TREDWELL.

Union Agricultural Ware-houses and Seed-Store.

23 Fulton St., New-York.

April, 1856. 2t.

RINGLETS! RINGLETS! RINGLETS!

☞ CURL YOUR HAIR. ☜

AFTER MUCH STUDY, TOIL AND EXPENSE, I have discovered the secret of making the most straight, uncouth and coarse-looking hair, either to CURL or WAVE, at the option of the individual, in the most graceful manner, for life; thus enabling persons greatly to improve their appearance. Only three applications of my preparation are necessary. The preparation, which is not only perfectly harmless to the skin and hair, but renders the latter permanently silky and glossy, does not cost more than *fifty cents*, and the materials of which it is composed can be bought anywhere. I will send the RECEIPT for making it, to any person who forwards me ONE DOLLAR, by mail, pre-paid. Address

PROFESSOR H. N. ROWLAND,
Practical and Analytical Chemist, Philada., Pa

☞ The RECEIPT and one bottle of the PREPARATION, sent free by mail, for $2. 10tf

NEWBERN AGRICULTURAL WARE-HOUSE.

Horse Powers and Threshing Machines.

WE would call attention to the following letters in regard to the THRESHING MACHINES sold by us:

SPRING HILL, Lenoir County, N. C.

William H. Oliver & Co.

Gentlemen:—I purchased last year one of Flickinger's Portable Horse Powers, Grain Threshers and Separaters, (same as advertised for sale by you) and am much pleased with it. I threshed out my Wheat and Rye crops with it last Summer and can recommend it as being one of the best Machines I ever saw. Farmers who wish to purchase need have no hesitation in doing so, as they cannot help from being pleased with its operations. With four horses or mules it will thrash 20 bushels of Wheat per hour. It requires two hands to feed the thresher, and one or two to carry the straw out of the way. The Separater separates the grain from the straw and does the work of two hands. It is easily carried from one field to another, and can be put to work in a few minutes, and not liable to get out of order. The horse power will answer to drive a Cornsheller, Straw Cutter, Corn and Cob Crushor, &c., &c. JESSEE LASSITER.

SWIFT CREEK, Craven Co., Dec. 1, 1856.

Messrs. William H. Oliver & Co.

Gentlemen:—The Wheat Thresher and Horse Power I purchased of you, worked to my entire satisfaction. To give you some idea of the work it will perform, I timed it and found that it threshed out a stack that made 18 bushels clean wheat in 37 minutes, and during that time the Machine had to be stopped once or twice, so as to move the Thresher, on account of the bands stretching.

Respectfully,
BISHOP E. DUDLEY.

Mr. William A. Pugh of Pitt County, also writes us that he is much pleased with one of the same Machines, purchased from us. He writes that he threshed out 65 bushels of wheat in two hours.

Mr. Edward Carman, of Hookerton, Greene County, writes to us, that the Threshing Machine sold him fully came up to the recommendation we gave it. He says he has threshed out about 2200 bushels of Wheat with it. Can thresh 200 bushels per day, and is much pleased with it.

NEWBERN, Jan. 3, 1856.

Messrs. William H. Oliver & Co.

Gentlemen:—Last Summer I purchased of you, one of your Horse Powers and Threshers for my plantation, in Hyde County. I regret that I am not able to speak of its work from personal observation, but my overseer in whose judgment I have great confidence, gives me a very favorable account of the Machine. Our Wheat crop was small, our oat crop nearly two thousand bushels, both were threshed with the Machine. I am also much pleased with the Reading Corn Sheller, (with Fan attached,) purchased from you. Yours, very respectfully,

JOHN R. DONNELL.

GREENE COUNTY, N. C.

Messrs. William H. Oliver & Co.

Gentlemen:—The Wheat Thresher and Horse Power purchased of you last spring has worked to our entire satisfaction. We have threshed out of our own and neighbors' wheat, some six hundred bushels. It will thresh with ease two hundred bushels per day. We recommend them as a first rate Machine.

Very respectfully,
THOMAS HUGHES,
NATHAN EDWARDS.

KINSTON, Jan. 7, 1856.

Messrs. William H. Oliver & Co

Gentlemen:—I am much pleased with the Horse Power and Thresher purchased from you, and would recommend them as a first rate Machine.

Respectfully, JOHN A. PARROTT.

☞ A number of the above machines kept constantly on hand and sold at Baltimore prices.

☞ To prevent disappointments Farmers who intend purchasing from us will please send in their orders as soon as possible.

GRAIN CRADLES.

Made with four to six Fingers, with best quality Scythes attached.

We would particularly call attention to an improved Grain Cradle, the pattern of which was gotten up by one of our most experienced farmers, and sent on by us to the manufacturers. They are particularly adapted for cutting short grain, as by a peculiar bend in the sneath, the person using them can, without stooping, cut the straw very near the ground. A supply of them, also several other kinds constantly on hand.

REAPING AND MOWING MACHINES.

We will furnish McCormick's, Manny, or any other Reaping and Mowing Machines at Manufacturers prices.

One of McCormick's Mowers and Reapers daily expected.

Every variety of Agricultural Implements, Castings, Fertilizers, &c., &c., &c., constantly on hand and sold at the lowest prices.

Fifty ton of Central American Guano just received on consignment which we are selling at $40 per ton.

☞ An Illustrated Catalogue of the various Implements and Machines sold by us will be furnished on application.

WILLIAM H. OLIVER & CO.
COMMISSION MERCHANTS,
NEWBERN, N. C.

☞ Strict attention given to the sale of Country Produce, also to receiving and forwarding Goods.

May 1, 1856.

ATKINS' AUTOMATON:

OR,

SELF-RAKING REAPER AND MOWER,

BEST MACHINE IN USE.

1 (the first) used in 1852.
40 used successfully in 1853.
300 in twenty different States in 1854
1200 in all parts of the Union in 1855.
3000 building for the harvest of 1856.

THERE ARE SIX GOOD REASONS FOR this unparalleled increase and great popularity: 1st. It is strong and reliable, and easily managed. 2d. It saves the hard labor of Raking. 3d. It saves at least another hand in binding. 4th. It saves shattering by the careful handling in raking; besides, the straw being laid straight, it is well secured in the sheaf, and does not drop in the after handling, and the heads are not exposed in the stack, so that the GRAIN saving even exceeds the LABOR saving. 5th. It is a good Mower, being one of the best convertible machines in use. 6th. It has a knife that does not choke.

Its other excellencies, too numerous to mention here, are fairly given in the circulars. Its intrinsic worth is also attested by the award (mostly in only 3 years) of

OVER 70 FIRST PREMIUMS!

PRICE.—REAPER AND MOWER, $200.—$75 on its receipt, $75 first September, and $50 first December. Price of SELF-RAKING REAPER only $175. Considerable saving in freight to those at a distance who order prior to 1st March; also liberal discount for advance payment.

To secure a Machine, order immediately. Though so little known the past season, and none ready for delivery till 1st May, yet not two-thirds the customers could be supplied. The reputation of the Machine is now widely established, so that THREE THOUSAND will not as nearly supply the demand as twelve hundred did last year, and we shall also be selling four months earlier.

☞ Order early, if you would not be disappointed.

PAMPHLETS giving IMPARTIALLY the OPINIONS OF FARMERS, together with orders, notes, &c., mailed to applicants, and prepaid.

☞ Write to us at CHICAGO, (Ill.,) DAYTON, (Ohio,) or BALTIMORE, (Md.,) which ever is nearest to you.

J. S. WRIGHT & CO.

"Prairie Farmer" Works, Chicago, Dec. 1st, 1855

1—4m.

OUR CATALOUE OF AGRICULTURAL BOOKS,

COMPRISING SEVENTY-FIVE DIFFERENT BOOKS ON AGRICULTURE,

Will be sent postage free to all who will favor us with their name and address.

Among the books recently published by us are:

CHORLTON'S GRAPE-GROWER'S GUIDE. 60c.
REEMELIN'S VINEDRESSER'S MANUAL. 50c.
CRANBERRY CULTURE. 50c.
STRAWBERRY CULTURE. 60c.
ELLIOTT'S AMERICAN FRUIT-GROWER'S GUIDE $1 25.
THE STABLE BOOK. $1.
BOUSSINGAULT'S RURAL ECONOMY. $1.25.
THOMPSON ON FOOD OF ANIMALS. 75c.
PRACTICAL LAND DRAINER. 50c.

For Sale by all Booksellers, or sent by us free of postage on receipt of price.

C. M. SAXTON & CO.,
Agricultural Book Publishers,
No. 140 Fulton-st., N. Y.

April, 1856.—1t.

LIFE PRESERVING PATENT SWINGLETREE.

THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed, with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached to it. It is a cheap safe, and certain protection against danger. It can be attached to old or new vehicles.

☞ Notice is hereby given, that any infringement on this Patent, or any immitation, or attempt to make or use by any modification, this Patent Swingletree in any of the counties above enumerated, the person or persons so offending will be prosecuted to the full extent of the law, in the U. S, Courts at Washington.

P. P. WILLIAMS & CO.

Raleigh, Feb. 14, 1856.

FARMER'S HALL,

RALEIGH, N. C.

The subscriber is general agent for the sale of Agricultural Implements and Farming utensils, Field seeds, Fertilizers, &c. &c. Almost all the articles brought to the late Fair are kept on sale and are offered at manufacturers prices with no cost of transportation, as they were brought free by the Railroad.

There is also a new fire proof Ware House on the lot, in which all articles on consignment are stored. The following are some of the articles brought to the late Fair: Horse Powers, Wheat Fans, Corn Drills, Field Rollers, Corn and Cob Crushers, Harrows, Cultivators, and Plows of every size and description.

JAMES M. TOWLES.

GOTTSCHALK'S MUSIC.

WE have just published the "Marche de Nuit," and "The Last Hope," which have been such great favorites and had such wonderful success at Gottschalk's late Soirees. They are produced in the best style, and exactly as played by the composer.—Where the passages are difficult there is an extra stave for facility, thus bringing them within the capacity of performers of medium ability. "The Last Hope" is altogether different from an old edition of the same work. Inquire for Hall's new and only correct edition. In press, "La Serenade," ballad; also, new editions of "Souvenir d'Andalouise," "Jota Arragonane," Jerusalem," fantaisie, and other favorite pieces.

WM. HALL & SON,
No. 339 Broadway, N. Y.

May, 1856. tf.

Book Binding.

JOHN H. DeCARTERET & SON.

RAREIGH, N. C.

ARE still carrying on the BOOK BINDING business in all its branches at the old stand over "Turner's N. C. Bookstore."

Their increased facilities will enable them to execute the binding of Periodicals, Newspapers, Music, &c., with promptness and dispatch, at New York prices.

Books sent to them from any part of the State, with directions, will be bound in any style desired, boxed and sent back without delay. Address

JNO. H. DeCARTERET & SON,
Raleigh, N. C.

May, 1856. tf.

H. D. TURNER,

GENERAL BOOK AGENT,

No. 1 Fayetteville Street, Raleigh, N. C.,

PUBLISHER OF THE

SUPREME COURT REPORTS OF NO. CA.,

Has for sale, in quantities or by retail, an extensive assortment of Books and Stationery, Comprising Greek, Latin, French, Spanish and English Books; School Books; Blank Books; Juvenile and Toy Books; Miscellaneous Works; with all the New Publications as they issue from the Press: also a large assortment of Stationery and Fancy Articles.

SCHOOL BOOKS.—All the different kinds o. Primers, Spelling Books, Reading Books, Grammars, Arithmetics, Geographies, Atlases, Histories, Dictionaries, &c.; also Works on Astronomy, Algobra, Chemistry, Philosophy, Mathematics, Surveying, Geometry, Botany, Book-keeping, Rbetoric, Mensuration, Trigonometry, Geology, Mineralogy, Cookery, Farming, Gardening, Medicine, Theology, Penmanship, Architecture, &c., &c. He has always on hand the Standard English Law Reporter and Digests, and every Treatise on Particular subjects; together with the various State Reports and Digests, and a general assortment of Law Books of every description.

BLANK BOOKS.—Ledgers, Journals, Day Books, Invoice, Cash, and Letter Books, Receipt and Bill Books, Memorandum, Bank and Pass Books, Ciphering and Writing Books.

RELIGIOUS BOOKS.—Family, Pocket, and School Bibles, Testaments, Hymn Books, Prayer Books, and various religious works, by approved authors.

SACRED MUSIC BOOKS.—Piano Music, Music Paper, and Musical Instruments.

STATIONERY AND FANCY ARTICLES.—Consisting of Foolscap and Letter Paper, Note, Folio Post and Drawing Paper, Morocco, Tissue, Pith, Tracing and Marble Paper; Knives, Steel Pens, Quills, Wafers, Sealingwax, Pocket Books, Albums; Ink Powder, India, Indelible, Japan, Black, Blue, and Red Inks; Prints, Gold and Silver ever-pointed Pencils, Seals, Wafer Stamps, Sand and Sand Boxes; Scrap-Books, Visiting Cards, Card Cases, Gold and Silver Paper, Inkstands, Slate and Slate Pencils, Lead Pencils, Bristol and Ivory Boards, Chess Men, Maps, Battledores, Rules, India Rubber, Carmine Saucers, Newman's, Reeves's, and American Water Colors, &c.

N. B.—BOOKBINDING done, in all its various forms, with neatness and dispatch.

☞ GARDEN-SEEDS.—To be had at the North Carolina Bookstore. Garden-Seeds, warranted fresh and good, crop of 1855, selected from the most approved Seedsmen and Gardeners in the Northern Country.

February, 1856. tf

MOWING AND REAPING MACHINES.

ALFRED M. TREDWELL invites the attention of the Farmers of North Carolina to his arrangements for supplying Mowers and Reapers to that State.

Parties desiring information will please address him, stating the kind and amount of work they want a Machine for, and their letter will meet with prompt attention.

The machines most suitable for their wants will be kept constantly on hand, but parties wanting a Machine would do well to order early.

Having succeeded to the business in Agricultural and Horticultural Implements, Machinery, Fertilizers, &c., heretofore conducted by Messrs. Ralph & Co. at No. 23 Fulton street, he is prepared to furnish goods of his own make, of good quality and at low prices. A fine assortment of goods in the line always on hand.

In connection with extensive farming operations for some years past, he has given much attention to the raising of Short Horn, North Devon and Ayershire Cattle and other fine stock, and now offers to parties wishing to purchase stock, the advantage of his knowledge and experience.

Union Agricultural Warehouse and Seed Store No. 23 Fulton street, (near Fulton Market) New York City. April, 1856.

FARMING IMPLEMENTS.

Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete assortment of the most approved Farming and Horticultural Implements, of good quality and at low prices.

For sale by R. L. ALLEN,
189 and 191 Water Street, N. Y.

Jan. 1856

Newbern Agricultural Warehouse.

WILLIAM H. OLIVER, & CO.,

GENERAL COMMISSION MERCHANTS Newbern, N. C. Among our stock of Agricultural Implements may be found Ploughs, embracing some 40 different kinds.

Straw Cutters of all the most approved kinds, varying in price from 5 to 50 dollars a piece; Corn Shellers, from 7 to 60 dollars a piece; among which may be found Readings celebrated Sheller, capable of shelling and fanning at same operation 2000 bushels corn per day. Also, the verticle cylinder, double and single iron and wooden spout shellers.

Grain Fans from 15 to 34 dollars a piece, among which may be found the best Fans in use. Wheat Thrashers and Horse Powers complete, capable of threshing 300 bushels wheat per day. Cultivator's, Harrows, Horse Rakes, Horse Hoes, Improved Scythes and Cradles. Plough Castings of every variety; farmers Boilers and Cauldrons; Sausage Meat Cutters and Stuffers; Pure Peruvian and Mexican Guano; Chappells Fertilizer; Ground Plaster; Bone Dust; Prepared Guano, Poudrette, &c. &c..

Hoe & Co.'s Warrented Circular and other Saws; Patent Leather Banding; Best Bolting Cloth; Mill Machinery; Mill Stones; Water Wheels; Premium Georgia Cotton Gins, and Gin Gearing, &c., &c., &c., all of which will be furnished on the most liberal terms by WILLIAM H. OLIVER & CO.

Newbern, January 1, 1856.

Strict attention given to the sale of all kinds o country produce.

DR. STRONG'S COMPOUND SANATIVE PILLS

These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints, Chills and Fever, Dyspepsia, Costiveness, Liver Complaint, Jaundice, Sick Headache, Scrofula, Salt Rheum, Fevers of all kinds, Loss of Appetite, Obstructed and painful Menstruation, and all lingering diseases.*

As a Female Medicine they act like a charm, and when taken according to the directions, they never fail to cure the worst cases of **Piles**, after all other remedies fail.

They purify the blood, equalize the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action: and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

Also

DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds, Calarrh, Bronchitis, Croup, Whooping Cough, Asthma, Consumption, Nervous Diseases, Dyspepsia, Costiveness, Erysipelas, Disease of the Heart, Inflammation and Pain in the Chest, Back and Side, and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food, in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant, Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups. Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capable of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regular Appetite, and Strengthen the System.**

Price 25 cents per box, containing 25 doses of Medicine.

Call on the Agents who sell the Pills, and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of cures.

Both kinds of the above-named Pills are for sale in **Every Town and Village in North and South Carolina.**

And at Williams & Haywood, Raleigh, N. C.
May 1855. 3—

GREENSBOROUGH MUTUAL INSURANCE Company. The cost of Insurance on the Mutual plan is but a small sum, compared with a joint stock company. This company being located in the Western part of the State, consequently much the larger portion of the risks are in the West, very many of which are in the country.

The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President.*
S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney.*
PETER ADAMS, *Sect. & Treasurer.*
W H CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf.

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assuredfor life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $30, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

SLAVES are insured for a term of from one to five years, for two-thirds their value.

All losses are paid within 90 days after satisfactory proof is presented.

DIRECTORS.

CHARLES E. JOHNSON,	WM. W. HOLDEN,
WM. D HAYWOOD,	WM. D. COOKE,
JOHN G. WILLIAMS,	R. H. BATTLE,
H W HUSTED,	WM. H. JONES,
WM. H. MCKEE,	P F. PE-CUD'
CHARLES B. ROOT,	SEATON GALES.

OFFICERS.

DR. CHARLES E. JOHNSON, *President,*
WILLIAM D. HAYWOOD, *Vice President,*
JAMES F. JORDAN, *Secretary,*
WILLIAM H. JONES, *Treasurer,*
H. W. HUSTED, *Attorney.*

CHARLES E. JOHNSON, M. D. } *Medical*
WILLIAM H. MCKEE, M. D. } *Board of*
RICH'D. B. HAYWOOD, M. D. } *Consultation.*

R. H. BATTLE, } *Executive Com-*
W. W. HOLDEN. } *mittee.*
CHARLES B. ROOT, }

Communications should be addressed, (post paid) to JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA
MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

DIRECTORS:

J. B. G. Roulhac, Raleigh.
Henry D. Turner, do.
J. R. Williams, do.
T. H. Selby, do.
C. W. D. Hutchings, do.
James F. Jordan, do.
James M. Towles, do.
James E. Hoyt, Washington.
Alex. Mitchell, Newbern.
Joshua G. Wright, Wilmington.
John M. Jones, Edenton.
W. W. Griffin, Elizabeth City,
F. F. Fagan, Plymouth
W. N. H. Smith, Murfreesboro'.
H. B. Williams, Charlotte.
Geo. A Smith, Milton.
O. F. Long, Hillsboro'.
Joseph White, Anson County
Josh Boner, Salem,
A. T. Summy, Asheville.

OFFICERS OF THE COMPANY.

J. G. B Roulhac, *President.*
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*

John R. Williams, }
T. H. Selby, } *Executive Committee.*
C. W. D. Hutchins, }

This Company has been in successful operation f more than 7 years, and continues to take risks upo all classes of property in the State, (except Stea

Mills and Turpentino Distilleries,) upon favorable terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Country risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured

The average cost of Insurance upon the plan of this Company has been less than one third of one per cent. per annum, on all grades of property embraced in its operations.

All communications in reference to insurance should be addressed to the Secretary, post paid.

J. C. PARTRIDGE, *Sec'y.*

Raleigh, Jan. 9th, 1855.

Warrenton Female Collegiate Institute,

WARRENTON, N. C.

THE 30th session of this school will commence on the 3d of January next, prepared to give thorough instruction in all the branches of female education. Pupils received at any time. All charges from time of entrance.

Terms per Session:

Board, washing, lights and fuel in rooms,.....$60 00
English tuition,.....12 50
Music on Piano, Guitar, Melodeon, with use of instrument, each.....23 00
Oil Painting,.....15 00

Persons wishing further information, will please apply to GRAVES, WILCOX & CO.

December, 1855.

THE LAWTON BLACKBERRY.

HAVING accepted from Mr. Lawton the ageney for this remarkable Fruit we are prepared to furnish plants at the following rates.

Half a dozen plants. $3.
One dozen plants. $5.
Fifty plants. $15.
One hundred plants. $25.

Carefully packed and shipped from New-York without extra charge.

The money must accompany the order.

C. M. SAXTON & &O.,
Agricultural Book Publishers.
140 Fulton-st., N. Y.

AYER'S PILLS,

A new and singularly successful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousness, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but effectual Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the churches all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exalted position and characteras to forbid the suspicion of untruth.

Among the many eminent gentlemen who have testified in favor of these Pills, we may mention:

Dr. A. A. Hayes, Analytical Chemist, of Boston, and State Assayer of Massachusetts, whose high professional character is endorsed by the

Hon. Edward Everett, Senator of the U S.

Robert C. Winthrop, Ex-Speaker of the House of Representatives.

Abbott Lawrence, Minister Plen. to England.

†John B. Fitzpatrick, Cath. Bishop of Boston.

Also, Dr. J. R. Chilton, Practical Chemist, of New York City, endorsed by

Hon. W. L. Marcy, Secretary of State

Wm. B. Astor, the richest man in America.

S. Leland & Co., Propr's of the Metropolitan Hotel, and others.

Did space permit, we could give many hundred certificates, from all parts where the Pills have been used, but evidence even more convincing than the experience of eminent public men is found in their effects upon trial.

These Pills, the result of long investigation and study, are offered to the public as the best and most complete which the present state of medical science can afford. They are compounded not of the drugs themselves, but of the medicinal Virtues only of Vegetable remedies, extracted by chemical process in a state of purity, and combined together in such a manner as to insure the best results. This system of composition for medicines has been found in the Cherry Pectoral and Pills both, to produce a more efficient remedy than had hitherto been obtained by any process. The reason is perfectly obvious. While by the old mode of composition, every medicine is burdened with more or less of acrimonious and injurious qualities, by this each individual virtue only that is desired for the curative effect is present. All the inert and obnoxious qualities of each substance employed are left behind, the curative virtues only being retained. Hence it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

As it is frequently expedient that my medicine should be taken under the counsel of an attending Physician, and as he could not properly judge of a remedy without knowing its composition, I have supplied the accurate Formulæ by which both my Pectoral and Pills are made to the whole body of Practitioners in the United States and British American Provinces. If, however, there should be any one who has not received them, they will be promptly forwarded by mail to his address.

Of all the Patent Medicines that are offered, how few would be taken if their composition was known! Their life consists in their mystery. I have no mysteries.

The composition of my preparations is laid open to all men, and all who are competent to judge on the subject freely acknowledge their convictions of their intrinsic merits. The Cherry Pectoral was pronounced by scientific men to be a wonderful medicine before its effects were known. Many eminent Physicians have declared the same thing of my Pills, and even more confidently, and are willing to certify that their anticipations were more than realized by their effects upon trial.

They operate by their powerful influence on the internal viscera to purify the blood and stimulate it into healthy action—remove the obstructions of the stomach, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wherever they exist, such derangements as are the first origin of disease.

Being sugar wrapped they are pleasant to take, and being purely vegetable, no harm can arise from their use in any quantity.

For minute directions, see wrapper on the Box.

PREPARED BY JAMES C. AYER.
Practical and Analytical Chemist.
LOWELL, MASS.

Price 25 Cents per Box. Five Boxes for $1.

SOLD BY

P. F. Pescud and Williams & Haywood, Raleigh, N. C., May, 1856. 5—y.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. COOKE, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

EXECUTIVE OFFICE,
Raleigh, Jan. 26, 1856.

MR. WILLIAM D. COOKE has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

DEAR SIR:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
January 26th, 1856. WILL: A. GRAHAM.
WM. D. COOKE, ESQ.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

N. B.—The copartnership heretofore existing between W. D. Cooke and Samuel Pearce in the proprietorship of the Map has been dissolved by mutual consent.

WILEY'S NEW FORM BOOK.

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Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher. B. S. HEDRICK, Agricultural Editor.

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Miscellaneous.

Culture of Carolina Rice.

[This is the title of a paper in the March number of the Journal of Agriculture and transactions of the Highland and Agricultural society of Scotland. Mr. R. Russell, the author of the article travelled during the early part of last year through the Southern States, and gathered his information directly from the planters. He appears to have been favorably impressed by what he saw, and he seems to have taken great care to be correctly informed on every point of general interest. Those who live immediately in the rice-growing country understand perfectly well all the different processes in the culture of the staple, but those who like ourselves, have always lived in the up-country will derive a good deal of very interesting information from this paper. We have room for only a portion of it.—Eds.]

In Georgia and the Carolinas there are a good many marshy grounds in the pine region, that are caused by beds of clay sending the water to the surface in springs. They are composed of black vegetable matter too deficient in earthy materials to be possessed of fertility of any great permanence when cultivated. It was on such soils, however, that the first settlers raised rice; but being easily exhausted, recourse had constantly to be made to new lands. Though a considerable quantity of rice is here and there raised over the upper country on such soils, and even on the dry cotton lands, for domestic use, none of it is reckoned sufficiently good in quality for exportation. The discovery that the tide-water swamps were particularly well adapted for the culture of rice is comparatively recent. At first the barren sandy soils were much more valued than they are now, because indigo was raised upon them, and was one of the great staples of the country. This article can now be brought to the European market at a much cheaper rate from our possessions in India, and its culture has therefore been abandoned in the United States. A great revolution has thus taken place in the relative values of the swamp grounds and the dry pine-lands.—

The value of the latter is at present merely nominal, while good rice-grounds are worth far more than any other land in the country. The common price of rice-grounds in the neighbourhood of Savannah is $150 per acre, and some on the Cooper River were sold at $200. These prices are more than double those of the best sugar-lands on the Mississippi.

It is on the *tide-water swamps* of the Savannah, and the numerous other rivers in Georgia and the Carolinas, that the fine rice known in Europe as the Carolina rice is cultivated. The production of rice for exportation is in a great measure confined to these swamps; and it is further limited to the *fresh*-water-tide swamps, —for where the tides are salt, or even brackish, they are unsuitable for irrigation. Rice is cultivated about four miles below Savannah, and twelve miles above it.

When one stands on the top of the steep bluff at Savannah, a fine view is got of the vast swamp which stretches to the westward and northward. In some parts of the rice-grounds magnificent trees are seen, now bare and destitute of leaves, but covered with grey moss hanging like drapery from every branch. With the exception of some live oaks, and also a few cabbage palm-trees, which remind one that he is approaching the tropics, the general mass of vegetation, notwithstanding the warmth of the weather, looked as dead as it does here in December.

I visited some plantations both below and above the town. They are mostly large on this river, though they vary from 200 to upwards of 1000 acres in rice crop. From the nature of the works which are required to reclaim the tide-swamps, and render them fit for cultivation, large capitals are invested. Rice can thus only be cultivated on the large-farm system, and where labour can be commanded. In some districts in which rice-culture was early introduced, the plantations have been much diminished in size by the division of property among families. On the Black River in South Carolina, some of the plantations are as small as 60 acres; but this is found to be about the minimum extent to which profitable culture can be carried. When such small estates come into the market, they are almost invariably bought by adjoining proprietors, and the tendency to large properties begin again formed is thus seen.

I spent a day riding over the rice-plantations about 4 miles above Savannah, in company with several large proprietors. Keeping out of view the miserably tame scenery on the banks of the Savannah, the river itself bears a considerable resemblance to the Tay at Newburgh in Fifeshire. Reeds were growing in the rich alluvial soil flooded by the tides, and the embankments raised to protect the rice-grounds were in every respect similar to the *dykes* which protect the wheat-fields of Parkhill, or of Mugdrum Inch. After crossing the river in a boat, and getting mounted on a pony on the bank, the low and level lands, stretching as far as the eye could reach to the west and east, and more than three miles to the sandy high grounds, gave me at once an idea of the vast extent of land which had been rescued from the tides, and rendered so productive.

The soil of the rice-grounds, for more than a mile from the river, is very fertile, consisting of a strong clay, rich in vegetable matter. Towards the high grounds it is more peaty, in consequence of the earthy matter brought down by the river having been mostly deposited near its channel by the swamp-growth acting as a sort of filter. From the want of the earthy matter, this is a very poor soil—just as much so as our own peat-mosses are before they are improved by clay or sand.

Main canals, having sluices on the mouths, are dug from the river to the interior about 20 feet in width; and as they sometimes extend across the whole breadth of the swamp, they are more than 3 miles in length. The rice-plantations are subdivided into fields of about 20 acres each. The fields have embankments raised around them, with sluices communicating with the main canal, so as they may be laid dry or under water separately, according as it may be required. Numbers of open ditches are also dug over the grounds, for the purpose of allowing the water to be more easily put on or drawn off.

Considerable diversity prevails in the mode of cultivating the rice crop. Some planters plow all the grounds every year. Those who follow this system give a light furrow in the beginning of January, and afterwards make shallow furrows or drills 15 inches apart to receive the seed, which is sown broadcast at the rate of from 2 to 3 bushels per acre. A small

quantity of water is then admitted for a day or two, until the grain sprouts.

The plough used on these rather strong soils is exceedingly light, and drawn by a mule.—I have seen a negro woman carrying one on her shoulder from one field to another. On a plantation of 500 acres under rice, I found that 22 inules performed the whole ploughing, besides that of cultivating 70 to 80 acres of Indian corn on the light sandy soils of the pine country. No one can say that there is any waste of animal power in this case. Rice-culture involves a large amount of manual labour, for about 100 negroes, men and women, are required to tend and reap the crop on this extent of land, and take the grain to market. This number of field hands was only got out of 250 negroes, young and old. The common calculation is, that the working hands are about one-half of the total number of negroes on the plantation.

The most approved and general mode of cultivating the rice-fields, when free from weeds, is to sow the seed without ploughing. The stubble of the previous crop is burned over in spring, which is easily effected from the large quantity that is left at harvest. A negro then goes into the fields, and makes a rut with a hoe between the rice rows of the former crop. This serves as a receptacle for the seed. Sometimes this operation is done by a small drill plough. The seed is either covered with a rake, or the water is admitted at once, and covers it by washing down the soil.

In all cases, the water is admitted to the fields as soon as the seed is sown, and when the young shoot appears above ground the water is drawn off. In the course of a week the crop usually receives another watering, which lasts from 10 to 30 days, according to the progress which vegetation makes. This watering is chiefly useful for killing the land-weeds that make their appearance as soon as the ground becomes dry. But, on the other hand, when the field is under water, aquatic weeds in their turn grow up rapidly, and, to check their growth, the field is once more laid dry, and the crop is then twice hand-hoed. By the 1st of July the rice is well advanced, and water is again admitted and allowed to remain on the fields until the crop is ripe. This usually takes place from the 1st to the 10th September. The water is drawn off the day previous to the commencing of reaping. The rice is cut by the sickle, and the stubble is left from 1 foot to 1 1-2 feet in length, according to the rankness of the crop. A day after being cut it is bound up into sheaves and carried by the negroes to the bank of the main canal, whence it is carried in flat-bottomed boats to the threshing machine. The rough rice is then sent to Savannah in boats.

Such is a very general outline of the method which is followed in the culture of rice: the particulars are varied, according to many circumstances which arise. So far as I had an opportunity of judging, I thought that the planters displayed much skill in the management of their estates. The most of the rice-planters are highly educated men, fully alive to every improvement, and give close attention to the management of their properties during winter, spring, and the early part of the summer, when the climate is particularly healthy.

The average produce of rough rice on the Savannah swamps is estimated at from 45 to 55 bushels per acre. Though the fields have been long under cropping the produce is still large, but there is no doubt that it is smaller than when the land was first cleared; still from 70 to 80 bushels are sometimes got on old cultivated fields. Crops of rice are usually taken in succession as long as the land is clean; but when it becomes foul through weeds, or the "volunteer rice," it is laid under dry cultivation for a year. This is attended with great benefit; for although no manure is applied, and two crops—one of oats and another of potatoes—are taken, yet the land is so much renovated that the succeeding crop of rice is often increased by a half, and sometimes even doubled.—The oats are sown in the beginning of January, and the surface of the ground is merely scratched with a hoe to cover them. The warmth and moisture of April and May commonly send up a very thick and tall crop, which almost smothers the grass and the "volunteer rice," and it is ready to be harvested by the end of May. As soon as the land is cleared of this crop, potato-stems are planted in 5 feet rows, and during the growth of the potatoes the intervals are thoroughly cultivated by the hoe and the plough. The manner in which the potato-crop is managed I have never heard of being adopted elsewhere. The tubers are planted in March or April on dry pine-barren soils

that have been well manured. An immense mass of stems grows up in this climate under such treatment. The stems are cut off and transplanted in the rice-fields, and one acre of them serves to plant twenty. And what is singular, the crop from which the stems are cut, is by this process rendered more abundant.—This arises apparently from the crop being forced to grow throughout the warm season, and its perennial tendencies being so far developed. The quality of the potatoes which are raised in the Southern States is very inferior —the tubers are soft and waxy, particularly so on the rice-grounds. The finest potatoes which I saw in America were on the table of a rich planter with whom I dined one day. On my putting to him the question, whether they were the produce of his rice-grounds, about which he had been talking highly in the morning, "Oh, no!" he applied; "these, I suppose, are from Liverpool."

The "volunteer," which is interesting in a physiological point of view, causes a great deal of trouble to the planters. The rice-seeds that are shed when the crop is cut, and that lie over the winter, produce an inferior quality of grain, for they then appear to revert to their natural state. Though the husk of the volunteer rice is of the same light-yellow colour as that of the finest quality, the kernel is red, and a few grains of this kind in a sample detract much from its market value. There are several varieties of volunteer rice, and they are usually the most vigorous plants in the field; and as some of them ripen before the main crop, they fall out and increase with great rapidity.

The rice plant adapts itself in a most wonderful manner to the most opposite conditions of soil in respect to moisture. There is no cultivated plant that bears any resemblance to it. The same variety that grows on the upland cotton-soils and on the dry pine-barrens grows in the tide-swamps where the land is laid under water for weeks at a time; and even in the lower part of the delta of the Mississippi, where the fields are under water from the time of sowing to the time of reaping.

Rice straw, on the dry upland soils, ripens when the grain ripens, as is the case with that of our cereals; and the stubble dies at once.—Many must have observed, however, that the ears of oats and barley that have grown on damp peaty soils ripen long before the straw, and the stubble often retains a certain amount of vitality and freshness for some time after the crop is cut. But in the irrigated tide-swamps the vitality of the rice plant is prolonged to a most wonderful extent by the system to which it is subjected. When the rice is ready for harvesting, and all the grains in the ear are quite hard with the exception of a few of the lower pickles, the stem and leaves remain quite green. The rice grows from 3 1-2 to 5 feet in height, and, as already said, considerably more than a foot of stubble is left. No sooner is the crop cut than the stubble sends out shoots and leaves from its *top-joints*, and in some instances it has produced as many as 30 bushels of rice per acre as a second crop from the same sowing. This is a curious physiological fact, and one that does not seem to be generally known, for on going to New Orleans, Dr. Barton called my attention to a communication by a French writer who had discovered a method in Egypt whereby two crops of rice might be got from one sowing. The plan was not made known, but I told him that I thought it could be no other than that which was well known to the Carolina planters. The autumn frosts, however, generally cut down the second growth before the grain has time to ripen. But every season, after harvest, a considerable growth of stems and leaves takes place, and the rice-fields are then represented as assuming all the appearance of a second summer. These leaves and stems are killed by the first night's frost, and afford a large quantity of withered vegetable matter in spring, which readily permits of the whole fields being fired during a dry period, and to be thus cleared and fitted for being once more scratched with the hoe, and sown with rice.

It is readily seen that large capitals are necessary in the culture of rice on the tidal swamps. A great expenditure of labour is constantly required to maintain the banks in good order, to clear out the drains and canals, as well as to keep the sluices and valves in repair. It would be far from satisfactory to give any detailed estimate of the expenses and profits of rice culture. The fact, however, of the rice-grounds being higher in value than any land devoted to any other crop, is quite sufficient to attest the profitableness of rice culture. Nor is this so much to be wondered at when it is considered that the land which is capable of raising rice

with advantage is comparatively limited, and has been almost all occupied for a considerable time. This is the reason why the exports of rice from the Southern States have not been increasing for many years. The demand for rice in America far exceeds its supply as a common article of food, for it is but a very small portion of land upon which it can be profitably raised. The slaves on the rice and cotton plantations are supplied with Indian-corn instead of rice. The latter is used more as an article of luxury, for it is far higher priced than Indian corn. In the tropical parts of the British possessions in India, where the cultivated land is all irrigated, rice is the cheapest article of food, as it is by far the most productive grain-crop in low latitudes.

From the conversation that I had with the planters in the neighbourhood of Savannah, I became fully persuaded that Indian corn is much less prolific in the Southern States than in the Northern. This was amply confirmed afterwards by the planters in the delta of the Mississippi. The produce of Indian Corn, on the rich alluvial lands of Georgia or of Louisiana, is less than the half of what it is on soils of the same fertility in Northern Kentucky. The moister atmosphere and higher temperature of the South develop a great growth of stems, while produce of grain is comparatively small. This is perhaps the chief cause of the planters in the cotton districts importing such a large quantity of corn from the Northern States.—Considerable quantities of rice are raised throughout the cotton-region in dry culture; and though the produce varies much in different years, it is probably greater than that of Indian corn in the average of seasons. One of the "crackers," or small farmers, who cultivate the poorest pine-barren lands, assured me that he did not raise more than ten bushels per acre of Indian corn, though the land was manured: with the same treatment, twenty bushels of rice would be reaped.

The objection to the culture of rice on the dry upland soils arises from the much greater amount of manual labour which is required to keep the crop free from weeds. The lengthened period of hot weather over which its growth is extended, and particularly the circumstance of this crop, like our cereals, either being sown broadcast or in narrow drills which do not admit of horse-hoeing, tend to give great encouragement to weeds, so that its culture demands too much hand-labour to be generally profitable. Rice also requires much more labour to prepare it for food; and hence, although 40 bushels of rough rice are often got on the cotton-lands of the uplands that rely for a supply of moisture on the summer rains, the more easily tended Indian corn is the great staple, even in the Southern States, where it is much less productive than in the North. The very successful culture of rice in the tidal swamps has much to do with the economy in the amount of labour required to raise the crop, through the extraordinary manner in which the rice-plant can withstand the extremes of being laid dry or under water at intervals—a process which materially serves to destroy both the land and water weeds.

The rice-grounds are comparatively healthy to white men in winter, but they are the very reverse in summer and autumn, when the crops are growing and ripening. It has been often remarked, that the swamps, in their original state, along the Southern rivers of the United States, were by no means so deleterious to the whites as they are now, when brought under cultivation. This seems to apply, to a certain extent, to all the rich alluvial soils in the river bottoms, but is particularly applicable to the rice-grounds that are irrigated by the tides. Indeed, the undrained swamps remain comparatively healthy so long as they are covered with the natural vegetation. The mere stirring of the soil, and the exposing of it to the atmospheric influences of a hot climate, invariably give rise to malaria. For this reason, the Campagna in Italy became much more unhealthy, as Dr. Arnold states in his *Roman History*, after its drainage. It is said to be attended with extreme danger to a white man to remain, during the hot season, for one night on the rice-grounds of Carolina. Captain Smith very properly contends, in his excellent work on *Italian Irrigation* (vol. ii., p. 359) that there is nothing deleterious in the mere culture of rice, but in the mode in which the irrigation is managed. This opinion, I may here remark, is confirmed by the fact that the rice-grounds at the mouth of the Mississippi, on which the water is not allowed to stagnate, are more healthy to the white inhabitants than either the sugar or cotton grounds of the lower Mississippi, that are under dry culture. But the

practice adopted on the tide-swamps, of Carolina, of laying the fields dry at intervals during summer and autumn, seems to give rise to miasmata of the most deadly character to the white inhabitants, but from which the coloured are exempt. The planters, with their families, invariably leave the rice-grounds during the hot season, and remain in a more healthy part of the country until the crops are harvested.

Though the negroes are not liable to those diseases which are so fatal to the white inhabitants in summer, yet they do not increase in the rice districts. In fact, I was informed that it requires good management on the part of the planters to keep up their numbers, so as to do away with the necessity of going into the market to buy. This circumstance alone is a great drawback in the profits of rice-culture, for on the cotton plantations, with ordinary care, there is a constant increase in numbers. The damp ground and the nature of the labour render the negroes very liable to pulmonary diseases.—The children, also, are particularly subject to measles and hooping-cough, which often prove fatal. One planter informed me that he now sends all the children born on the rice-plantations to his cotton estates in the interior. Out of sixty children he had only lost four, and experience convinced him that the loss would have been at least four times greater had they remained on the rice-grounds.

So far as I could learn, I have every reason to believe that the negroes on the rice plantations have a liberal supply of food and clothing. About half a pound of bacon a-day is the usual allowance for an able-bodied negro, with Indian-corn meal and molasses. They almost all have the privilege of keeping pigs and poultry of their own, which they sell, and are thus enabled to buy tobacco, tea, and other groceries. A planter one day pointed out an old negro to me, who had not done any work for ten years, but who had got his rations regularly with the others, and a few days before this he had sold two pigs for 30 dollars.

The cost of providing the negroes, old and young, with food and clothing, is from 30 to 40 dollars a-head. The value of slave property has been gradually rising for several years; but a slight reaction had taken place about the time of my visit, owing to the pressure in the money market. At the present time, the negroes in the rice plantations are worth upwards of *one hundred pounds* (500 dollars) all around; some sales had been made as high as *one hundred and fifty* [750 dollars). Good field hands bring considerably above 1000 dollars. Negroes were not worth much more than fifty pounds (150 dollars) twenty-five years ago.

The discipline maintained on all the plantations is almost as strict as that of our military system; and so long as slavery exists, a certain amount of firmness seems quite necessary for maintaining due regularity and authority. As we rode over the rice-grounds above Savannah, we came up to the gang of more than twenty negro men clearing out one of the main canals. They were up to the middle in water, and were throwing out the soft mud upon the bank along which we rode. Here for the first time I saw the black "driver," with a long whip tied round, his shoulders, superintending his brethren, who worked as methodically as machines. I believe, if they had got no orders to desist from their occupation till we passed, that we should have got the benefit of the clearings. A loud shout from the "driver" brought the whole to a stand. Then we were subjected to their vacant and complacent stare. In other parts of the ground the women were working with the spade and mattock in repairing the banks. They were all well clothed and provided against the changeableness of the climate.

Before going to the south, I had been led to suppose that the planters were all very sensitive on the subject of slavery, and that I should avoid the topic in conversation. But I soon found that they had no such feeling in the matter: with some of the Cuban planters it was different, for I came to understand that the physical condition of their slaves, and the treatment which they received, were as matters of etiquette not to be alluded to. On the contrary, a large proprietor of rice-grounds on the Savannah told me "to go and inquire into the moral physical condition of their negroes, with as much freedom as I would among the agricultural labourers in Lothian or Berwickshire, and to go home by Jamaica, and make a comparison between the emancipated negroes and their own slaves."

Several large mills are built in the neighborhood of Savannah and Charleston for preparparing the rice for market. This process consists in drying the rough rice, then shelling it by grinding stones, as our millers do with oats

before manufacturing them into meal. The small portions of the husks of the rice that remain on the pickles after the grinding, are taken off by pounding in large mortars with huge pestals driven by steam. The finishing process consists in polishing the rice by brushes made of hair. The rice which grows in the tide-swamps is of much better quality than what grows in dry cultivation. The pickles of the irrigated rice are large and equal in size, and the husk is easily separated from the kernel; whereas the upland rice, being smaller and more unequal, the sample is not only inferior, but there is a great deal more waste and labour in its preparation for market.

From the Carolina Spartan.

Ho for North Carolina.

TEA! TEA! TEA!

MESSRS. EDITORS: Every schoolboy has learned from his geography that a singular shrub called *matte* is found in the southeastern part of South America, of which the natives make tea; but it will be astonishing to your readers to learn from the subjoined article, copied from the correspondence of the Journal of Commerce: 1st. That said article, as a beverage, is regarded as not only a great luxury, but almost a *necessary* of life! 2d. That so vast an amount of it is exported to other parts of the world. But above all, 3d. *That it has long since been known to abound in North Carolina!* Hoping that our industrious neighbors of that State will do the public the favor to look after this rare and valuable shrub, and give us some more definite account of it, I beg that you will insert the following article and oblige,

Yours truly, SPARTACUS.

Matte or Paraguay Tea—its use in Spanish America—found also in North Carolina—its preparation in Brazil.

SAN PAULO, BRAZIL, 1855,

While in the neat Brazilian town of Paranagua, in the new province of Parana, I observed many raw hide cases which the blacks were unloading from mules, or conveying to the ships riding at anchor in the beautiful bay. Upon inquiry I ascertained that these packages, weighing about 120 pounds each, consisted of *matte*, *i. e.* Paraguay tea. The substance, so little known in the United States, forms truly the principal refreshing beverage of the Spanish Americans south of the equator, and millions of dollars are annually expended in Buenos Ayres and Chili in its consumption. The town of Paranagua in Southern Brazil, containing about three thousand inhabitants, exports every year nearly a million of dollars worth of *matte*.

Matte is the name of the prepared article of the tree or shrub, which is commonly known to botanists as the *Ilex Paraguaensis*. It is also classified by Von Martius as belonging to the *Rhama* family, and he gives it the scientific name of *Cassine Gongonha*. The Spaniards usually denominate it *Yerbà de Paraguay*.

I was not a little pleased to find that my friend Dr. R. (the American physician and botanist mentioned in a previous letter,) was perfectly acquainted with the mode of its preparation, as well as its class and family. The pleasure thus derived, however, gave way to astonishment, when he informed me that in the United States the Paraguay tea not only was to be found, but was actually used as a beverage by the people of the region where it grew. Dr. R. recounted to me, one day in his office at Limeira. (Province of San Paulo,) his wonderful adventures, when a younger man he roamed over nearly every Southern and Western State, hunting for the weed which was vulgarly supposed to cause the milk sickness. Although he did not find the cause of that disease, which has so damaged many a speculation in western towns and villages, yet he made the acquaintance of a little tree in North Carolina, from the leaves of which many of the country people of the old North State "made tea." If I remember rightly, he informed me that it was the *Ilex Euponia;* but scientific readers must not hold me responsible for the name, as my note book may probably mislead me. A few years afterwards Dr. R. was in this most glorious field for a botanist in the world—this Southern Brazil, whose magnificent *flora* has been the wild delight of every favored follower of Linnæus that has been permitted to enter it. In the course of his rambles he encountered the *Ilex Paraguaensis*, and immediately saluted it as his old acquaintance (under features but little different) of North Carolina. Some months elapsed, and he visited *Paranagua;* and he was almost as much surprised at another discovery, which was not, however, in the botanical line. He found in this out-of-the-way part of Brazil an American woman engaged in the

delightful art of preparing *feijoes* and *toucinho* (pork and beans) for natives and foreigners who might patronize her establishment. In conversation with Dr. R. in regard to the *matte*, she exclaimed, "why, Doctor, this is the same *truck* we use in *Carolina* to make tea." Here was a most striking confirmation of the true conclusion of science.

Now, if this tree or bush really abounds in North Carolina, why may not the enterprise of some of her citizens add to the exports (laid down in every geography as tar, tobacco, turpentine and lumber, *matte?* Brazil and Paraguay are reaping their millions from a shrub which grows spontaneously, and the subject is really worth investigation in our own country.

In Brazil and Paraguay the *matte* can be gathered during the whole year. Parties go into the forest or places where it grows, break off the branches with the leaves. A process of kiln drying is resorted to in woods, and then the branches and leaves are transported to places where there is water power, and are broken in mortars. The substance, after this operation, is almost a powder, though small stems denuded of their bark are always permitted to remain. By this simple process the *matte* is prepared for market, only requiring the raw hide cases mentioned at the beginning of this communication. Its preparation for drinking is equally simple. A small quantity of the leaf, either with or without sugar, is placed in a common bowl, upon which cold water is poured. After standing a short time, boiling water is added, and it is at once ready for use. Americans who have visited Buenos Ayres or Montevideo may remember to have seen, on a fine summer evening, the denizens of that portion of the world engaged in sipping, through long tubes inserted into highly ornamented cocoanut bowls, a liquid, which, though not so palatable as iced juleps, was certainly far less harmful. These citizens of Montevideo and Buenos Ayres were enjoying with their *bembilhas* a refreshing draft of *matte*. It must be imbibed through a tube on account of the particles of leaf and stem which float upon the surface of the liquid. This tube has a fine globular strainer at the end. Kidder, in his "Sketches," says that great virtues are ascribed to this tea. It supplies the place of meat and drink. "Indians who had been laboring at the oar all day, feel immediately refreshed by a cup of the herb, mixed simply with river water. In Chili and Peru, the people believe that they could not exist without it, and many persons take it every hour of the day. Its use was learned from the natives; but, having been adopted, it spread among the Spaniards and Portuguese, until the demand became so great as to render the herb of Paraguay almost as fatal to the Indians of this part of America as mines and pearl fisheries had been elsewhere.

It grows wild, and never has been successfully cultivated. Although attempts were made by the Jesuits of Paraguay to transplant it from the forests to their plantations, yet it was without result.

I hope that this little communication may come under the eye of some North Carolina gentleman, who has a turn for such matters, and will give an examination of the tea bearing *Ilex* which is found in his State, and which has so long furnished a beverage to some of the interior people.

I remain yours truly, PAUL.

From Barnard's American Journal of Education.

Plan of an Agricultural School.

BY JOHN A. PORTER,

Professor of Agricultural Chemistry in the Yale Scientific School.

An Agricultural School worthy of the name, is one of the most evident and pressing needs of the country. We are to a great extent, a nation of agriculturists, yet without an institution in the whole length and breadth of the land, which furnishes the proper instruction to the agricultural community.

Professorships of Agricultural Chemistry, indeed, exist in two or three institutions, but away from farms, without means of practical illustration and experiment, and unsupported by other branches of instruction, which would give completeness to an agricultural course, they languish as they must continue to do while they stand alone.

These professorships form no exception to the statement that the country is unsupplied with adequate agricultural instruction.

The wants of the country in this respect are obvious.

First.—A well stocked and well furnished farm, fully up to the standard of the best agri-

culture in the world, to show what the best existing practice is.

Secondly.—An experimental farm, to improve on the best practice, and advance the cause of agriculture.

Thirdly.—The means of instruction in all the sciences connected with the culture of the soil.

The farm should comprise in its buildings and yards all of the improved arrangements for the feeding and watering of stock; all of the manure-saving and manure-making, and labor-saving contrivances, all of the improved machinery and implements which have been submitted to the test of experience, and been proved to be of economical value. Everything should be constructed from the outset with a sole view to economy and profit, and in the subsequent history of the farm it should be regarded as successful, just in proportion to its pecuniary returns. The farm should be stocked with cattle and horses, and all other domestic animals of different breeds, including as great a variety as possible, in order to show the characteristics of the different races, and give to pupils the opportunity of studying their peculiarities. It should be under the superintendence of a thoroughly practical man, and be conducted at his own risk and for his own profit. Model farming in any practical and economical sense of the term is not likely to be realized on any other plan. It is by no means so important that the farm should be the *best* farm in the country, as that it should be the best *managed* farm. If it should furnish obstacles to be overcome in the character of the soil, necessity of draining, soil mixing, or other improvement, so much the better rather than the worse. The farming of a rich virgin soil, calls for no aid of science, and demands no skill. The obstacles are just what are wanted to illustrate what skillful scientific farming is, where the farmer as well as nature has something to do.

The person in charge of the farm should have access to all agricultural publications of value, both American and Foreign, and keep himself informed in relation to all new implements and fertilizers, and other suggestive improvements; but would be under no obligation to put any of them in practice, unless satisfied of their economical value. Improvements requiring large outlay, such as draining and irrigation, if evidently of great utility or of permanent value, would be executed at the expense of the institution. The management of the farm should be decidedly conservative, and furnish an example of progressive but prudent farming, conducted with a sole view of profit; including under this term that lasting advantage which consists in the improvement of the soil. All of this would be secured by making the income of the farmer dependent on the produce of the farm itself, precisely as if the land he cultivated were his own.

The second great want of the country in an agricultural point of view is an *experimental farm*, connected with the practical farm as above described, and devoted to experiments in scientific agriculture. The subjects for experiment of practical importance to every farmer, are innumerable. Rotations of crops, admixtures of soils, the preparation and use of manures, the diseases of plants, the introduction of new plants are a few among the number. The experimental farm should be under the control of chemical or other professors, for experiments in their several departments: and be regarded as purely experimental ground where the idea of immediate profit should not interfere in the least degree with perfect freedom of investigation. The other or main farm being conducted with a view to profit alone, the accounts of the two should be kept entirely distinct, and all material passing from one to the other should be paid for with a fair equivalent.

The directors of the experimental farm would have occasion to superintend experiments in feeding, and in the dairy, which would be best made on the associated practical farm, and would increase to some extent the labor there required; but this also should be paid for, and the character of the latter as a solely practical farm, be in all respects maintained.

The experimental farm would not probably be remunerative in a pecuniary sense, but it would be the means of testing for the associated farm and the country, the value of suggested improvements, of teaching the science of experiments to the pupils of the institution, and from time to time of bringing to light new and important truths in scientific agriculture.

A Museum of Agricultural Products is another essential feature of an agricultural institution, such as the country needs. It should exhibit grains, roots, fruits, woods, in all their variety. Its collections would serve for the

purpose of illustration in lectures on agricultural botany and physiology. A botanical garden, connected with it would add greatly to its value.

A Museum of Agricultural Implements, should also form a part of its means of instruction. These would serve as illustrations of lectures on the mechanics of agriculture, in which these operations would be explained and their comparative merits considered.

Such collections can be made at comparatively trifling expense. A suitable building being provided, the material to fill it would flow in from the liberality of farmers and manufacturers, quite as fast as could be desired.

A veterinary hospital for the treatment of diseased animals of the vicinity of the farm, would also be an essential feature of the plan. It should be under the care of a competent veterinary surgeon, who would give instructions in the nature and care of the various diseases to which animals are subject.

The principal branches of science which should be taught in an agricultural school, are Chemistry, Meteorology, Geology, Minerology, Zoology, Entomology, Animal and Vegetable Physiology, Veterinary Medicine and Surgery. To these may be added surveying, a knowledge of which is of the utmost convenience to the farmer, and should form part of a liberal agricultural education.

Chemistry stands prominent in the list, in view of its superior and acknowledged importance. Agriculture aims at the transformation of earth and air into grain, wood and fruit. The process is in great part chemical. Every dunghill and compost heap, and square foot of soil is a laboratory. Every farmer, whether he would be or no, is a chemist from the nature of his profession. But it is open to his choice to be one, or to possess himself of the knowledge of the properties and mental relations of the materials with which he deals. The knowledge he needs and must obtain from the scientific chemist. It is none the less necessary if he never make an analysis. It makes him a rational and economical experimenter, and thus puts him on the road to advance in his profession.

The importance of Minerology and Geology, which treat of the materials out of which soils are formed, and from which they derive their character, whose principles guide the Agriculturist in his search for fertilizing materials, and frequently furnish him with the most valuable hints in locating and improving his lands, is equally obvious.

The importance of Meteorology, or the knowledge of the relations of heat and moisture to the atmosphere, and the soil, and the plant, and the laws on which change of weather depend, is no less apparent.

Although not necessarily of every day application, all these branches form, properly a part of a liberal agricultural education. And so of all the other sciences which have been mentioned. The enterprising man possessed of such knowledge, will find abundant occasion for its application and abundant suggestions in its possession.

On the value of a knowledge of the principles involved in the breeding of stock, and the laws on which its improvement depends; of the diseases of plants and animals, and of insects injurious to vegetation, and the means to be employed against them, it is needless to dwell. Instruction in all these branches should obviously form part of an agricultural course.

What a center of light would such a school as here described be to the whole agricultural community. All purported discoveries in Agriculture would come to be tested, and important truths developed by experiment would go forth from it to the world. Through its public museums, its well arrayed buildings, its variety of stock and latest improvements in every department, open to the public, it would become the direct instructor of the whole community. Through its pupils it would disseminate widely the varied practical information which its course would furnish. And beyond all this it might be made the means of eliciting the experimental labor of hundreds of intelligent farmers throughout the country, for the decision of the important agricultural questions which are still unsettled.

The latter point is worthy of some further illustration. Agricultural experiments, as at present conducted, are so extremely unproductive, not so much for want of care in their execution, as on account of their isolation. An experiment which belongs to one set of conditions of soil, exposure and climate, is taken as final for all circumstances, with different results, the consequence is rather a diminished faith in all experiments, than a conviction of the neces-

sity of multiplied and varied trials. The only remedy is a carefully organized system of experiments. Suppose such a system once in operation, and instead of individual experiments, comparatively valueless from their isolation, the same experiment made in a hundred different places during the same year, under all the varieties of soil, climate, and exposure which a hundred different localities combine; suppose the results of such system of experiment carefully collated and compared by its proper head, and the latent principles which they contain deduced, it would not be long ere the innumerable mooted questions which float through our agricultural journals, and hold their place there year after year would give place to definite views, resting on the sure basis of accumulated experiment, and take their places as solid stones in the edifice of a general head knowledge.

But such a system must have its well-deserved plan of experiments, and its own experimental ground; asking co operation, for fear of being burdensome, only where co-operation is necessary. All these, such an institution as is here described, with its corps of instructors, would furnish, and thus beside doing its own independent work, be the means of eliciting to a great extent the zeal and labor of intelligent agriculturists throughout the country in the cause of agricultural improvement.

With the help of such a system of experiment, it is scarcely hazarding anything to say that an amount of progress in agriculture is possible in ten years, which would otherwise take a century to accomplish.

Lastly, such an institution would be the source of published information to farmers in relation to its experiments, and all improvements to which they may lead. It would also keep them informed of the comparative value of all fertilizing materials offered in the market for the use of agriculturists. It should even control, as would be by its published analysis, the manufacture and relative price of these articles, and thus secure the farmer against the fraud to which he is constantly exposed in the sale of spurious and worthless articles.

In founding an agricultural school, such as is here described, great advantage will be realized by connecting it with a University already established. Where Professorships of Chemistry, Geology, Minerology, Meteorology and Engineering already exist, with well furnished laboratories, and extensive mineral collections, the foundation is already laid, and half the expense has already been incurred. Such a basis may be regarded as one hundred thousand dollars already contributed to the cause of a great agricultural school.

An equal sum in addition, would be needed for the other departments, although, a beginning might be made with less. But even supposing the amount doubled, or even quadrupled, it could not be regarded as large, when considered with reference to the magnitude of interests involved, or the results which might be reasonably anticipated. An annual increase in the value of land in the State of Connecticut alone, by the one hundreth part of one per cent., as a consequence of the knowledge which such a school would diffuse, would more than pay the interest on such an endowment.

An addition of one peck per acre to the potato crop of the same State would pay it.

An increase of one-thousandth in the product of hay, or one three hundredth in the dairy produce of the State would cover it.

It cannot for a moment be doubted, that practical results of immensely greater value than these could be reasonably expected to flow from such an institution.

Looking at the subject from a national point of view, the immense importance of the diffusion of knowledge on agricultural subjects, is still more strikingly impressed.

The number of horses in the United States, is estimated in the last census report, at about four and a half millions. An addition of one dollar per head to their value, as a consequence of a better knowledge of the principles involved in the breeding and rearing of these animals, would amount to four and a half millions of dollars.

The number of neat cattle is estimated at about eighteen millions. At the moderate valuation of twenty-five cents per head, an improvement of one per cent. would be equivalent here also to an increased value of four and a half millions of dollars.

On taking a more general view, an addition of one per cent. to the annual agricultural produce of the whole country, would amount to sixteen millions of dollars per annum. Yet the possibility of such increase in value of stock and the products of the soil, is not a matter of question, nor is there any room for doubt that,

all that is in the way of it, is the lack of the knowledge, which such institutions as we describe are calculated to diffuse.

Of the practicability of such schools, supposing the funds at hand, there can be no reason for doubt. The land required is to be found in almost any locality for a fair equivalent. Information in relation to foreign improvements in agriculture is readily accessible, either in publications or on the spot. Instruction of the highest order in practical agriculture can be supplied from the ranks of our own best farmers. The means of instruction in the sciences connected with agriculture are no less readily attainable.

Neither is there any question as to the demand of the country for liberal agricultural instruction, and the patronage which such schools would receive.

In addition to all the material advantage which would flow from their establishment, they would have an influence which can scarcely be estimated, in elevating and dignifying the calling of the agriculturist. This they would do by their direct influence on those now engaged in agriculture, and again by calling forth to its calm and ennobling pursuits, talent and wealth which are now compelled to seek the dignified associations of learning in other professions.

By extending the course of instruction, for those who should desire it, into correspondence with the professional training required for the pulpit and the bar, the wants of the class referred to would be supplied, and a valuable acquisition of means and influence, which are now expended in other directions, be secured for the course of agriculture.

Schools such as are here described, would give, in fine, to the scientific agriculture they would create, the merited rank of a learned profession, and thus dignify as well as advance that branch of industry which lies at the foundation of our national prosperity.

Creosote for Warts.—Dr. Rainey, of St. Thomas Hospital, London, has written an article to the *Lancet*, detailing the effects of creosote applied to warts. He applied it freely to an obstinate warty excrescence on the finger, then covered it with a piece of sticking plaster. This course he pursued every three days for two weeks, when the wart was found to have disappeared, leaving the part beneath it quite healthy.

Migration of Plants.

Botanists have long been convinced that the facts connected with the diffusion of plants may often be explained by an inquiry into the structure of their seeds, the lightness of these and their capability of transportation by winds, by their texture preserving them from destruction in the waters of the ocean; by the prevalence of particular currents of the air or sea; or by the presence or obstacles to their dispersion.—It had been observed that (the God of) nature has provided a variety of methods for the diffusion of seeds. Many such have been noticed by naturalists, and their operations have been illustrated by facts well ascertained. The most important are doubtless winds, or rivers, or marine currents. The former convey the lighter kinds of seed to an incalculable distance, and the latter are well know to transport others occasionally from the most remote countries. Besides these more general causes, it is well known that seeds are often conveyed from foreign countries, which were transported in commerce. Various plants are well known to have been introduced into Europe by the accidental mixture of their seeds with rice brought from the East or West Indies, and those tropical countries have interchanged some of their productions in a similar way. Some seeds are capable of preserving their vitality in the stomach of birds, and are thus propagated. Such are the mistletoe and juniper. A number of facts are upon record, which prove that the migration of plants by means of currents in the ocean, to distant shores, where, if the climate is congenial to them, they form new colonies, is not a matter of conjecture, but a thing which actually takes place. Several remarkable instances of this description are recorded in the Amanæitates Academicæ. It is stated that the seeds of several plants of equinoctial countries are occasionally collected in the Hebrides.—*Pritchard's Physical History of Mankind.*

Manure Heaps.—The usual offensive odor and evaporation from them, may be entirely prevented by sprinkling over the dung heap, by means of an ordinary water can, a solution of a pound of common green copperas in a gallon of water.

What is it you must keep after you have given it to another? Your word.

Fancy Lop-Eared Rabbits.

Potatoes.

BUTT ENDS VS. SEED ENDS.—John Brown of Long Island, communicates the following to the Granite Farmer:

"Several years ago, I made some experments to satisfy myself concerning the disputed point as to which is the best portion of a potato to plant in order to obtain the largest and best yield. The exact result has been lost, and as I have often since heard and read assertions directly contrary to the conclusions which I then deduced, I resolved to repeat the experiments. Last spring I planted four rows of equal length, side by side, with two varieties of potatoes. In one row I planted none but the seed ends, so called, including about one-third of the potatoes, and in the next row I planted the butt ends of the same potatoes. I had one row of seed ends and one row of butt ends of a variety called Peach-blows. The yield of these four rows was as follows:

Pink-eyes,	butt ends,	217	pounds.
"	seed ends,	170	"
Peach-blows,	butt ends,	225	"
"	seed ends,	179	"

The potatoes raised from the butt ends were much larger than those from the seed ends, and appeared to be from a week to ten days earlier. This result corresponds with that of my former experiment. Had the whole field been planted with butt ends the yield would have been more than five hundred bushels to the acre. I also planted two rows next to the above; in one of which only I put large potatoes, half a tuber in each hill, cut lengthwise so as to divide the eyes equally, and in the other row I dropped only small potatoes, one in each hill. From the former I dug 181 pounds, and from the latter 134 pounds. I should add that the average yield of the field was about 180 lbs. to the row; and that large (not the very largest) potatoes were used for seed, cut lengthwise with a half of a tuber in each hill."

Shrubbery Planting.

Much of the effect and pleasure afforded by shrubbery, depends on its proper arrangement. The following remarks from the Floricultural Cabinet are practical, and may afford useful hints at this season:

"The shrubbery may be defined to be the link which connects the mansion and the lawn to the flower garden or to the other parts of a residence, and is most generally planted either for shelter or shade, although often as a screen to hide disagreeable objects, for which the plants which compose it are better suited than for forest or other trees. The shrubbery is often a matter of utility as well as of ornament, in which case it gives the highest satisfaction when formed for the purpose of shutting out the offices or the kitchen garden from the view of the house; for sheltering the latter, or the

garden, or for connecting the house with the garden and the orchard, the shrubbery becomes useful and interesting.

"Sometimes a shrubbery is formed merely for the purpose of growing rare shrubs, and for obtaining agreeable walks; in this case it is necessary to be at more pains, and to display a greater degree of taste in the laying of it out than in the formation of the useful shrubbery; in the former case, a tasteful arrangement of plants is a matter of less importance than the choice and disposition of kinds that will soonest afford shelter, and ultimately becomes thick screens.

"In planting shrubberies for screens, to hide disagreeable objects, evergreens should form the principal mass, as affording a permanent blind, and giving a cheerful appearance even in winter. A few deciduous shrubs of the most showy sorts, may, however, be with propriety added, which will give relief to the more sombre appearance of the evergreens, particularly while the former are in flower; but from their nature of annually shedding their leaves, and consequently becoming thin in winter, they are not so well calculated for a permanent blind.

"In the disposal of shrubs, the tallest should be planted furthest from the walk or front side, and the lower in stature in front, but if an immediate effect be desired, it is better to elevate the ground than to plant trees of too great an age; it is also a matter of importance that they may be planted thickly, as it is an easy task to thin them out when required. Little taste has generally been displayed in the formation of shrubberies as to the productions of picturesque beauty: they are planted too generally in the form of sloping banks, without the least natural beauty whatever; although in this way they may answer the purpose of blinding out disagreeable objects, are of little merit when seen from their best side.

"Great attention should be paid, in their planting, to give them a somewhat natural appearance, and not that of a surface so regular as if they were clipped with the garden shears. Straight lines should also be avoided as much as possible, and if the margin of the shrubbery should be broken with deep indentures or sinuosities, these should be neatly turfed over and kept mown. The walks which lead through this department should not be to any great distance in a straight line, if it can be avoided, neither should they be too much twisted. There is something so pleasing in a fine, gentle sweep or curve in a road or walk, that few are insensible of its beauty. The breadth of the walks should be regulated according to the length and scale of the place, as too narrow walks for principal ones have never a good effect; they should scarcely under any circumstances, be less than five feet wide, and unless for terrace walks of great length, should not be more than eight; if the greater breadth, they assume the appearance of a carriage-drive, and if narrower, they dwindle in appearance to a mere foot path."

To improve the breed of Milch Cows.

If those who are most deeply interested cannot be induced to make some effort to improve their milch cows, we must permit them to go on in the old way, in which they milk their cows one-half the season, and the cows milk them the other half.

We would select any cow remarkable for her productiveness in milk or butter, or both, without reference to anything else, and breed her to a bull whose dam had also the same property. A heifer calf from such parents would generally inherit their tendencies. If the grandams of both sides have also been deep milkers, the chances would be very much increased. Every farmer who is a dairyman, and depends for a large share of his income from the sale of milk and butter, should raise his own cows, and spare no expense to obtain such, not only for breeding as are adapted for this one object. As in order to keep up his stock, it is often necessary to make purchases, it also becomes important to know if there are any well recognized points to select a cow which are reliable and invariable. With the exception of the Alderney, perhaps there is no breed in which the milking property can be said to be a fixed characteristic. The *Farmers' Magazine* says of a prime milch cow:

The head should be small but rather long and narrow at the muzzle; the eye small, but quick and lively; the horns small, clear bended, and their roots at considerable distance from each other; neck long and slender, and tapering towards the head, with little loose skin hanging below; shoulders thin, hind quarters large and capacious; back straight, broad be-

hind, and joints of the chine rather loose and open; carcase deep, and the pelvis capacious, and well over the hips with fleshy buttocks; tail long and small; legs small and short, with firm joints; udder capacious, broad and square, stretching forward, and neither fleshy, low hung nor loose; hair soft and wooly; the head, bones, horns, and all parts of least value small, and the general figure compact and well proportioned."

This is such a picture as most would draw of a well-shaped cow, and yet who has ever seen one combining all these points? How many of them are necessary to constitute a deep milker? and do we not often find a deep milker who has very few of them? We believe many a cow is spoiled for the dairy by having been stunted and kept on too scanty food *when a calf*. Calves should receive as ample a supply, accordingly, and as succulent and nutritious character of food as a cow in milk. This enlarges and gives full size to the lacteal vessels, strength and vigor to the constitution, and we are confident materially aids to make the full grown cow what we want her to be.

Gubbin's tests for a good cow, as shown by the escutcheon, we find are much and increasingly relied on by dairymen. Without being able to understand how they are connected, or what they have to do with the lacteal secretions, (and which may be like many other matters which we do not understand, but cannot help believing) there is abundant evidence that they generally accompany, and have been fully proved by thousands of farmers to be a sign of deep milking. From our own observations, we know of no tests so reliable, and would advise every dairyman to procure a copy of the work.

The value of a dairy cow does not depend entirely on the amount of her yield, but also on the time she will go dry.—*Montgomery Ledger.*

To Destroy Vermin.—The celebrated Raspail, well known as one of the best French chemists, has given an important recipe for destroying vermin on animals, and also on plants and trees, important, at least, if true. The process he recommends is to make a solution of aloes—a quarter of an ounce of that gum to two pints of water, and, by means of a large brush, to wash over the trunks and branches of trees with this solution. This simple process, says Raspail, will speedily destroy all the vermin on the trees, and will effectually prevent others from approaching. In order to clean sheep and animals with long hair, they must be bathed with the solution, or be well washed with it. Raspail mentions several trials he has made with the mixture, all of which have been attended with the most complete success, and he recommends it very strongly to general use.

Clover.—Clover is excellent to be turned under for manure. The soil best adapted for it is clayey, and should be well drained. It is usually so in spring. Clover needs plaster. It (the plaster) should be sown in April on wheat. If sown later, the wheat may be too rank. A peck of seed to the acre is little enough. On clayey soils more seed is needed than on loamy ones. The medium northern clover makes the best hay, and is equally good to turn as manure. Clover is good for manure, because it takes less from the soil and more from the atmosphere than most other plants. It has many roots, (some of them large,) which open and soften the soil. They bring to the surface, too, the richness from below the ordinary soil.—*Rural New Yorker.*

Bush your Tomatoes.—It is just as sensible to grow peas without bushing them as it is tomatoes. You may grow both in a slovenly sort of way, if you have plenty of room on the ground; but you can grow either twice as well upon something to support them, and tomatoes are decidedly better grown up in the air than near the ground, under the shade of a mass of vines. The best support for a tomato vine is a short bush set firmly in the ground. The branches have room to spread among the limbs and support the fruit. The plan is much better than tying to stakes and trimming, according to our experience. We have tried both ways.—*Agricultural Exchange.*

Peach Worm.—Boiling water, says the *Horticulturist*, is a most excellent application in the spring of the year, for diseased and feeble peach trees, and is a certain remedy for the peach worm. A correspondent very effectually excluded the peach worm, by digging a basin around the foot of the trunk, forming a cavity a foot in width and four inches deep, and then pouring into this basin very thick whitewash, made of fresh lime, and suffered to stand one day before applying.

The Carolina Cultivator.

RALEIGH, JUNE, 1856.

Education of Farmers.

In our last number we considered the changes which are required in the higher institutions of learning in order that they may supply the wants of farmers. We will now examine the common schools, and see whether any improvement is practicable in them. But as this subject has already been so ably treated by other hands, it is not proper, or necessary that we should do more than call attention to a few particulars in which some farther change may be profitable. The subject of popular education is one of the most important that can claim the attention of thinkers, and men of the greatest ability have not been wanting to give it the full benefit of their closest study. What we would now bring to the notice of our readers is not so much new methods, as to call attention to what has been already tried in other states.

In regard to the studies pursued in common schools, the danger is that the number will be too great, rather than too small. We, therefore, do not wish to be understood as advocates of the plan which would make the common school an epitome of the academy or college. But at the same time we think that instruction might be given on some subjects which are at present neglected. A few hundred years ago it was thought that the study of arithmetic was proper only for those who were learned men. At a much more recent period geography was placed among the subjects to be pursued in common schools. Is it not possible still further to enlarge the list of subjects in which the great body of people may secure instruction. We know it will be objected at once, that by dividing the attention of the pupil between so many studies you make superficial smatterers, that are worse than ignorant; who do not know enough to understand that they know nothing. Our own opinion is that where superficiality and conceitedness have been the consequence of attending to many studies, the fault is more in the teachers than the subjects taught. Let a well educated, sensible man teach a person arithmetic, he will do it in such a way that, although the pupil may be able to "do every sum in the book," he will still understand that he has only taken the first step in a study that requires almost a life time, and the greatest talents and industy, in order to be fully mastered. The pupil that has been properly taught in arithmetic is not likely to imagine that he understands all of mathematics, nor need he be superficial or conceited. If he is so, it will not be because he has studied the first principles of the most difficult and extensive science known to the mind of man. But if the teacher knows only enough to believe he knows everything he will in all probability impart the same ideas to those who come under his instruction. The superficial and conceited master will turn out pupils like himself. In fact it cannot well be otherwise. The schoolboy is very apt to imagine that the master knows everything. When he finds that he knows as much as the master does what is more natural than that he should infer that he possesses all the learning in the world.

What we have said about arithmetic will apply to other studies. Let the instructor be well grounded in the branches which he attempts to teach, and he need have no fear of making smatterers, even if he should introduce studies which have not commonly been thought to belong to the elementary branches. The teacher's own knowledge of the subject need not be as extensive as would be required to give instruction in a higher institution, but it should be thorough as far as first principles are concerned.

The district school is all that the larger part of our citizens have to rely upon for the education they receive. Among those who are "graduated" at this home college, there are some of the best minds in the country. With this class a little assistance in the rudiments of the sciences would enable them in after life to make extensive attainments in these branches of knowledge. Whilst for want of a beginning made at school

they will scarcely ever take up the study at all.

What we claim then is that in addition to the studies usually taught in our common schools, some attention may be given to the first principles of the sciences that are of practical utility. The teacher need not put a treatise on astronomy into the hands of the pupil. But in a few familiar lectures, with the aid of a pair of globes, or even without them, he may give a general, but nevertheless, correct idea of the solar system, of the changes of the seasons, of the cause of the different length of the days and nights in summer and winter. The knowledge thus imparted may be, and ought to be thorough as far as it goes. In the same way the first principles of natural philosophy may be taught. A small text book, if well selected, may be admitted here, but still most of the instruction should come from the lips of the teacher.

Chemistry, although the most practical of the sciences, is very little known. Its study is confined almost exclusively to the high schools and colleges. But there is no reason why its elementary principles should not be learned by all. At the same time that it is the most useful, it is also one of the most interesting branches of knowledge. The reason commonly assigned for its neglect is that expensive apparatus is required in order to illustrate it properly. But very much has been done during the last few years to remove this difficulty. A well arranged laboratory for scientific research will always require a considerable outlay for apparatus and chemicals. But for teaching the elementary principles of the science a small sum is sufficient. The apparatus required to make all the experiments in Stockhardt's Principles of Chemistry, which is one of the best text books of the science which we have, may be purchased with from twelve to twenty dollars. For a course of Chemistry suitable for common schools, three to five dollars expended on apparatus would enable the teacher to make the experiments necessary in explaining the leading principles of the science. So there can be no difficulty on the score of expense. If there were a demand for apparatus of this kind it would soon be supplied, and at reasonable cost. In teaching Chemistry a small book of elements would be of advantage to the pupil, but most of the instruction should be given in lectures, accompanied by the appropriate experiments.

Instruction in the sciences, such as we have indicated, need not interfere with the regular course of study in the school. About one afternoon in each week spent in this way would enable children to acquire an amount of useful information which would be of very great value in the practical affairs of life. Very little, if any time would be lost in the regular branches of study. For an afternoon spent in listening to a plain familiar lecture on some branch of science would be as much relished by most children as a holiday. Their interest in the usual studies would thereby be increased, and their minds expanded and stored with valuable information. The knowledge of common things, the want of which is so much felt in every community, would be spread through the country, and unless we are greatly mistaken, we would all be improved, materially, mentally and morally.

The main difficulty in the way of what we have recommended, and it is quite a serious one, is that teachers generally are not prepared by previous study to give instruction in the sciences. But if it were known that a demand for such instruction existed, teachers would obtain the requisite information. Water will not run up hill, neither will teachers furnish education of a higher order than is wanted by those who employ them. The race of inefficient teachers will not become extinct as long as there is a demand for them.

We would close with a word of advice to those who are preparing to become teachers. It is, that they should never stop short of the best preparation for their work, which their means and talent will permit. Rather spend the last cent you have than be badly furnished for your employment.

To Protect Seeds from being destroyed by Field-Mice.—Baussingault has made some investigations with the design of protecting grain when sown, from the ravages of field-mice.—Seed steeped in a solution of blue stone (sulphate of copper) was not rendered poisonous to the mice. But when the seed had been placed in a solution of arsenic the mice were killed in a few hours. But for the exceedingly great danger of fatal accidents in the use of arsenic it might be employed with great advantage to protect seeds in the ground. The compound of arsenic rec-

commended is the arsenite of potassa. Jaussingault says he would be willing to have his farm invaded by an army of mice, in order that he might have their carcases for manure. The application of the arsenic does not prevent the seed from growing.

Analysis of Swamp Mud from Cumberland County.

In the swamps of the eastern and southern counties there are large collections of black vegetable matter. This deposit is sometimes several feet in thickness. When the amount of vegetable matter is large, as in the sample of which the composition is given below, it can be burned simply by drying in the sun, and throwing into heaps. It commonly contains too much earthy matter to be called peat, but it very much resembles that substance.

The specimen we examined is from the farm of Mr. McLaughlin of Cumberland county. When thoroughly air-dryed it gave the following results:

Loss by burning (vegetable matter and water,)	62 per ct.
Phosphates of Lime and Alumina,	4 " "
Carbonate of Lime (in the ash,)	5 " "
Insoluble sand and clay,	29 " "
	100

In order to form a good soil from a swamp of this character, the first step of course would be to drain it. We would then dig up the surface from three to ten inches according to the depth of the peat, throw it into heaps and let it dry and burn it. The ashes should then be mixed with a part of the remaining unburned peat, and that would form a soil of very great fertility.

Where the accumulation of vegetable matter is great, the ashes might with advantage be applied to the fields generally. We would however recommend as a preferable plan, to haul the ashes into the manure yard, together with almost an equal quantity of unburned swamp mud, or other vegetable matter, and there let them be thoroughly incorporated with the barn yard manure. The swamp mud and vegetable matter would effectually retain the ammonia of the fermentery manure, and the ashes of the burnt peat would furnish those mineral substances that are often wanting in farm yard manure.

Leaving out all the combustible matter in Mr. McLauchlin's peat, the composition of the ash is in every hundred parts—

Phosphates of Lime and Alumina,	10 per ct.
Carbonate of Lime,	13 " "
Sand and Clay,	77 " "
	100

There are also small quantities of Magnesia and Potash, with Sulphuric and Muriatic Acid, the exact amount of which we have not determined.

We have not had an opportunity to test by trial the suggestions which we make in regard to burning the peat or mud from swamps. But in England and Ireland, paring and burning is one of the well-established modes of reclaiming peat bogs. We would be glad to have the experience and suggestions of our readers on the subject. The amount of Phosphates in peat ashes which we have analized, makes it more than probable that the swamps may prove to be the best and cheapest means of enriching the adjoining land.

Analysis of a Marl from New Hanover County.

We have analized some of the marls found in this State, with the purpose of ascertaining the amount of phosphates which they contain. Only a limited number of specimens were at our disposal, but the result of the examination shows that the subject is worthy of further investigation. It is our intention to continue the examination as we shall have time and opportunity.

The compounds of phosphoric acid, as is well known, form one of the most valuable elements in all of the best manures. The high estimation in which farmers hold them is shown by the immense quantity of super-phosphate of lime which is sold every year. The demand for this fertilizer is constantly increasing. It is therefore very desirable that due search should be made in order to see if new beds of phosphates may not be discovered.

The specimen of which the composition is given below, is from the North East River in New Hanover county. We do not know the exact locality, nor whether the marl is abundant. It contains—

Phosphate of Lime,	20	per ct.
Phosphates of Alumina and Peroxide of Iron,	10	" "
Carbonate of Lime,	12	" "
Water,	12	" "
Fine Sand and Clay,	46	" "
	00	

This marl, then, contains thirty per cent. of phosphates, or nearly one-third of its weight. It is easily reduced to powder, and would probably be found to have a very good effect if applied to land after merely being broken into small pieces. Or it may be used to manufacture super-phosphate of lime. In converting it into super-phosphate there would be some loss, on account of the large proportion of carbonate of lime compared with the amount of phosphates. From the analysis we see that every hundred pounds of the marl contains twelve pounds of carbonate of lime, which will take twelve pounds of strong sulphuric acid neutralized, before there is any action upon the phosphates. For the acid will always attack the carbonates first. About sixteen pounds more of sulphuric acid will be required to convert the phosphates into super-phosphate of lime. So that every hundred pounds of the marl will require twenty eight pounds of sulphuric acid in order to change the insoluble phosphates into soluble super-phosphate. The super-phosphate made in this manner will differ from that prepared from bones, as the latter contains a considerable amount of organic matter containing nitrogen, which will form ammonia in the soil, and thus add greatly to the activity of the manure. The marl super-phosphate might however be mixed with Peruvian guano, or perhaps what would answer just as well, with fresh stable manure, and thus produce a very powerful and valuable manure.

It is commonly estimated that the insoluble, or neutral phosphates, are worth about a cent and a half per pound. At that rate this marl is worth nine dollars per ton. If found in sufficient abundance, and easily quarried, it may prove to be good property. It must however be remembered that its value for making super-phosphate is lessened by the large amount of carbonate of lime which it contains.

As already stated, twenty-eight pounds of sulphuric acid would be required for every hundred pounds of marl. This would give about twenty pounds of *pure* super-phosphate of lime, and about thirty pounds of gypsum. The sulphuric acid to act upon one hundred pounds, would cost, at three cents a pound, eighty-four cents. The super-phosphate and gypsum produced would be worth about one dollar and eighty four cents at New York manufacturing prices. Thus showing at least one dollar per hundred to pay for the marl and the expense of manufacturing it into super phosphate of lime. We hope the owners of beds of phosphates will consult their own and their neighbors' interest by looking into this matter. The so called coprolites are still richer in phosphates than this specimen of marl.

Exchangos.

Graham's Magazine for June, has been on hand for some time. It is a superb number, in point of execution, and contains a variety of choice reading.

Arthur's Home Magazine, for June, has also been received. Its substantial merits are the same as those of preceding numbers.

"Le Bon Ton, Journal de Modes and Monthly Report of Paris, London and New York Fashions," for June, has been duly received We have already commended it in decided terms.

"The Ladies' Repository," for the same month, has also arrived. It is a useful monthly, devoted to Literature and Religion. Cincinnati: Rev. D. W. Clarke, D. D., editor.

"Merry's Museum," for June, is on hand, with its usual variety of instruction and amusement for the young.

We have received the May number of the South Carolina Agriculturist; an excellent periodical; edited by A. G. Summer, and published by the State Agricultural Society of South Carolina. We take pleasure in entering it on our exchange list, and welcome it to our table as a valuable addition to our Southern agricultural literature.

We have received the June number of the American republication of "*Dickens' Household Words.*" This periodical is an old acquaintance distinguished for the entertaining and instructive character of its reading. It is published by Dix, Edwards & Co., New York, No. 321 Broadway. Price 25 cents a monthly number.

Putnam for the month is also before us, a highly interesting, and spirited Magazine, ably edited and handsomely printed. Its sectional spirit in past days was an insuperable objection, but we hope it has learned by experience the importance of excluding party politics from such a publication.

We have received a copy of An Address delivered by James L. Gaines, Esq., before the Moore Co. Agricultural Society, at Carthage. We hope to have room in our next number to copy a part or all of this excellent address. We are pleased to learn that the Moore Co. Agricultural Society is in a very flourishing condition.

Communications.

For the Carolina Cultivator.

Kine, Quinina, Quinine.

Kina Kina, that is, the bark of barks. Such is the name which the aborigines of the new world gave to that wholesome drug. The Spaniards who received it from the Americans spelled it *china china*, which, with that spirit of innovation and improvement which well befits a people so far advanced in philological euphony, we have changed into Quinquina or Barks.

So far, so good.

Now let us see what we can learn about the history of that substance.

In the first place, we are inclined to ascribe the discovery of the medicinal properties of quinia to birds, which were cured of a very intense fever by drinking water in which were infused the roots of the tree. Why not? We owe the discovery of the coffee plant to goats, whose strange capers and pranks after nibbling its buds, leaves and pods, attracted the attention of their Arabian shepherd. How did Basil Valentine, a famous chemist of the middle ages, find the therapeutic properties of antimony? He noticed that the sheep and cows which pastured on the lands from which he extracted his sulph. of antimony became prodigiously fat. The worthy monks of the convent of St. Peter happening to be leaner and lanker than well fed monks ought to be, he took it into his head to give them a dose of the new metal. They all died from the effects of it. Hence its name *anti-moine*. Sceptics say, however, that it is derived from the Greek words, *anti* and *monos*, viz: which does not like to be alone. We don't know.

A tradition says, that an Indian disclosed the wonderful properties of quinquina to the Corregidor of Loxa, by curing him of an intermittent fever. In 1638, the wife of the vice King, the Countess of Cinchon, was cured in the same manner. On her return to Spain she exerted herself so much to recommend the use of that wholesome medicine that some quacks began to use it under the name of the Countess' Powder, (pulvis comitissæ,) or of *Poudre del Cinchon*; hence the word *cinchona*, which to this day is its scientific appellation. That benevolent lady before her departure from America gave a quantity of it to the Jesuits of Lima, to be distributed to their patients. The first thing they did was simply to make a cargo of the precious powder and send it abroad, to be sold to the highest bidder, leaving the poor Indians to take care of themselves. The Jesuits became immensely rich, and took particular pains not to describe the tree from which they extracted it. The strangest part of the whole proceeding was their making the world believe that beyond a certain line, the cinchona could not possibly be found; and the Pope went even as far as to draw a chalk line beyond which the tree had no business to grow.

During nearly a century, Europe received it through the Reverend Fathers. The English hated the idea of getting it from such a source, and did everything to prevent its introduction in England. The British physicians were wont to remark, to use the language of the French paper from which we borrow most of these details. "How in the world, can a powder propagated by the infernal art of the Jesuits, be anything else than a diabolical preparation destined to cause the death of the poor people under the pretence of curing them? The French it seems, were not much better off than the English. "I have overwhelmed it forever!" exclaimed Guy Patin, perhaps the wittiest physician of his time: *Barbarus ipse facet, sine vero nomine pulvis!* In the meanwhile Quinquina was doing very well notwithstanding.

It was introduced in France by an Englishman called Talbot; the French doctors, even then, would not have anything to do with it, but Louis XIV was in favor of it, and it became fashionable all at once. Talbot used to charge $800 for *one* dose of barks. The king at last found it cheaper to buy out the famous remedy at once; and let it be known to the great glory of that monarch, who has so many sins to atone for, gave it away to the million. They learnt

then, to their utter astonishment, that Talbot's celebrated medicine was only the "simon pure," administered however in a certain manner. As soon as the price went down, it was a prodigious luxury to drink, as we do brandy or claret, a great tumbler full of quinia wine after dinner. And as Paris generally gives the tone to France, and France to the world, in regard to anything like fashion, the use of that wonderful beverage became almost universal.

What is truly extraordinary, is the fact (and *it is* a fact attested by trustworthy travellers) that the inhabitants of that region where the Quinquina is found, although subject to fevers of the worst character, never consented to use it. Humbolt says, that they would rather die than take it. The Indians do not believe in its medicinal properties and use it only as a dye. People know, we suppose, that Quinquina makes a most beautiful red.

But then, if the Indians neither knew nor believed in the medicinal virtues of Cinchona, how is it that they called it in their expressive language, "the bark of barks;" "a bark as is a bark?"

Indeed 'tis very strange.

Now, the reason of this long introduction is simply to state that according to the latest news from the quinological world, the famous species called *calissaya*, which came from Bolivia, at such a high price, and which of late had become rather scarce, is not the "only best." The French have discovered that many of the most despised cinahonnas, especially those found in the vicinity of Santa Fe de Bogota, are equal, if not superior to any other. We hope that in consequence of this important discovery it will become again fashionable to quench our thirst with a quinia julep, and thus get rid forever of

CHILL AND FEVER.

For the Carolina Cultivator.

MESSRS. EDITORS:—

DEAR SIRS:—I have concluded to write you a short communication on the subject of raising grass. We have had more experience here with herds-grass than any other sort. When we first commenced growing this crop we thought the proper way was to cut it often and we would get more hay, and our meadows would be cleaner; so as soon as the grass was grown out we commenced cutting and curing, and cured some of the nicest kind of hay, but the misfortune was that neither horses nor cattle would eat it, and the meadows grew up in wild growth. What do you think was our conclusion? Why the first year we concluded it was because the stock were not used to it, so we tried it again with the same results. Our conclusion next time was that meadows were not the thing they were represented to be, and so we let alone mowing them until we got our other crops off of hand; by this time the grass was fully ripe, about as yellow as a ripe wheat field. The grass was some harder to cut, but we found the horses and cattle to be very fond of it, so we came to the conclusion that ripe grass is the best if it don't look quite so nice as that cut green.

My experience is, that one cutting is the most profitable for herds-grass. Let it stand until it is yellow, that is, until the seed are ripe, then cut it nicely and save it without much sun, rain or dew, which can be done by having it stirred about a little, and piled up and opened again if need be, and then stacked carefully or housed, and it is then ready for use or to stay for winter. As soon as you get off your hay, you can have the use of your meadows for pasture, and I think it is worth more in that way than it would be to let it grow for another cutting; for the second cutting seldom more than pays for saving, and your meadow will in this way keep up as well as it would to keep your stock off and mow it twice.

Herds-grass will grow in any soil that is not too light, that is, too open or porous, if it is rich enough, but does much the best where it can have plenty of moisture.

A FARMER.

For the Carolina Cultivator.

Guano Convention, &c.

Raleigh May 20, 1856.

The Executive Committee of the North Carolina State Agricultural Society met. Present:—Thomas Ruffin, William R. Pool, Charles L. Hinton, P. A. Hamilton, William H. Jones, and the Secretary.

The object of the meeting being as stated by the Chairman, to have the Society represented in the Convention to be held at Washington City, on the 10th day of June next, for the purpose of taking some decisive steps on the part of those interested, for the reduction of the price of

Guano, the following persons were appointed Delegates to said Convention on the part of this Society, viz.

Henry K. Burgwyn, Northampton.

Hon. Weldon N. Edwards, Dr. Henry L. Plummer, Warren.

James M. Bullock, C. H. K. Taylor, Hon. A. W. Venable Thomas Miller, William A. Eaton, S. S. Royster, Granville.

Thomas McGehee, John W. Cunningham, Person.

James E. Williamson. Hon. Bedford Brown, Calvin Graves, George Williamson, Sen'r., Caswell.

Hon. William A. Graham, Paul C. Cameron, Elisha Mitchell, D. D., William J. Bingham, Orange

Hon. Thomas Ruffin, Edwin M. Holt, Sen'r., Gen. Benjamin Trollinger, John Stafford, Alamance.

Dr. W. R. Holt, Davidson,

Gen. J. B. Littlejohn. Col. J. A. Whitaker Dr. E. A. Crudup, Franklin

Richard H. Smith, Thomas P. Devereux, Nicholas L. Long, William Hill, Hon John Branch, Halifax

John S. Dancy, Robert R. Bridgers, Henry Mordecai, William Norfleet, William G. Battle, Turner W. Battle, Edgecomb.

Charles L. Hinton, R. A. Hamilton, Thomas J Lemay, Wilson W. Whitaker, Hon. L. O'B. Branch, Needham Price, A. T. Mial, Wake.

Hon. R. C. Puryear. N. W. Williams, Surry.

Peter W. Hairston, Davie.

John M. Morehead. James Sloan, Robert J. Lindsey, Ralph Gorrell Guilford.

Josiah Collins, Charles Pettigrew, H. G. Spruill, J. C. Norcom, Washington

Lewis Thompson, John Devereux, Cullen Capehart, Bertie.

William K. Lane, Col. John Everitt, Geo. W. Collier, Wayne.

Warren Winslow, Cumberland.

William D. Bethel, Thomas S. Galloway, Dr. Edward F. Broadnax, Hon. Thomas Settle, Rockingham.

Charles F. Fisher, E. D. Austin, J. F. Foard, Rowan.

Hon. A. Rencher, Dr. Fred Hill, Lawrence Haughton, Chatham.

J. W. B. Watson, Johnston.

Col. L. W. Humphrey, Onslow.

Thomas S. McDowell, Bladen.

Hon. Kenneth Rayner, Hertford.

On motion, ordered, That the Secretary address a letter (which he is authorized to have printed) to each Delegate, notifying him of his appointment.

On motion, it was also,

Resolved, That Delegates be appointed to represent the State Society in the Convention of the American Pomological Society, to be held in the City of Rochester, New York, on Wednesday, the 24th day of September next.

The following persons were then appointed to attend said Convention, viz: Messrs. George W Johnson, of Milton; Joshua Lindley, Guilford; Thomas Lindley, Chatham; and S. W. Westbrooks Guilford.

JOHN C. PARTRIDGE, *Secretary*,

For the Carolina Cultivator.

Descriptive Catalogue

Of Peaches that have been tested by actual bearing, previous to and during the year 1855, *by* Joshua Lindley, *New Garden, Guilford County, N. C.*

[Continued from page 77.]

DESCRIPTION OF PEACHES—1855.

56. *Cerro Gordo, C.*—This new peach is one of the very finest. The tree grows very thrifty, and has globose glands and small flowers. The fruit is large, round, of a pale yellowish white color, with some blotches of pale dull red next the sun. The flesh is rich, juicy, sweet, fine flavored and most excellent. The tree is a good bearer, and the fruit ripens the first part of August.

57. *Admirable, C.*—This tree is a thrifty grower with globose glands and small flowers. The fruit is large, of a pale yellowish white color, with some touches of red next the sun, flesh rich, fine flavored and excellent, and it is a good bearer, and the fruit ripens the first half of August.

58. *Old Mixon, F.*—This tree is of thrifty growth, with globose glands and small flowers. The fruit is large, nearly round, of a greenish white color, with some touches of red on the sun-side—flush, rich, juicy, fine flavored and excellent. The tree is a good bearer, and the fruit ripens early in August.

59. *Old Mixon, C.*—This tree grows thrifty, has globose glands and small flowers. The fruit is large, slightly lengthened, of a white

color, with some red next the sun; flesh rich, juicy, very fine flavored, and excellent, and the tree is a great bearer, and ripens its fruit the first part of August.

60. *Large, White.*—This tree also grows thrifty, has globose glands and small flowers. The fruit is large somewhat lengthened, color pale yellowish white, with a marbled red cheek. The flesh is rich, juicy and excellent, and the fruit ripens the middle part of August, and bears well.

61. *Anna Ruffin.*—This tree grows rapid, has uniform glands and small flowers. The fruit is large, white, rich, juicy and excellent, ripens its fruit the first half of August, and is a good bearer.

62. *Mary's Choice.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large, of a yellow color, with a red cheek. The flesh is rich, juicy and excellent; the tree is a good bearer, and the fruit ripens the middle part of August.

63. *Spanish, C.*—This tree grows thrifty, has globose glands and small flowers. The fruit is large, nearly round, of a pale yellowish white color, with a red cheek next the sun; its flesh is rich, very juicy, fine flavored and excellent. The tree is a full bearer, and the fruit ripens the first half of August.

64. *Old Spanish, C.*—This tree is a thrifty grower, has globose glands and small flowers. The fruit is large, nearly round, of a greenish white color, with some touches of dull red next the sun. The flesh is rather rich, juicy, and of good quality. The tree is an abundant and sure bearer, and the fruit ripens early in August.

65. *Hardy Gallande, C.*—This tree is rather thrifty, with uniform glands and small flowers. It is a small round peach, yellow with a deep red skin; flesh juicy and good, and the tree an enormous bearer, ripening early in August, but the fruit is so small that it is not worthy of being cultivated.

66. *White Pineapple, C.*—This tree grows thrifty, has globose glands and small flowers. The fruit is large, of a white color, touched off with a red blush on the sun side. The flesh is rich, juicy, fine flavored and excellent, and it ripens its fruit about the middle of August.

67. *Morris' White Rare-ripe.*—This tree grows thrifty, with uniform glands and small flowers. The fruit is rather large, nearly round, of a beautiful pale yellowish white color with some touches of red next the sun; flesh rich, juicy, very fine and excellent. The original tree brought from the North did not bear well, but a young tree budded from it has borne very full; this has happened in several other cases; ripe middle of August.

68. *Columbia.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large, of a yellowish red russet color in stripes and blotches; flesh yellow, much stained with red, rich, juicy and excellent, and it is a good bearer, ripening its fruit about the middle of August.

69. *President.*—A very thrifty tree with globose glands and small flowers. The fruit is large, nearly round, of a greenish white color, with a touch of red on the sun side; flesh rich, juicy and excellent, and the tree is a hardy and great bearer. The parent tree from the North is now growing and bearing well at the age of 27 years. It may be cultivated extensively to good profit. It ripens about the middle of August.

70. *Late Red Rare-ripe.*—A thrifty growing tree, with globose glands and small flowers. The fruit is large, nearly round, of a pale greenish white color, with a marbled dull red cheek, making a grayish appearance; the flesh is rich, juicy, fine flavored and excellent; ripe middle of August.

71. *Marrissania Pound.*—This tree grows thrifty, with globose glands and small flowers. The fruit is large, nearly round, of a pale greenish white color, with some blotches of dull red next the sun. The flesh is rich, juicy, and excellent, with a peculiar saccharine flavor that is very agreeable. The tree bears well and the fruit ripens the middle of August.

72. *Malta.*—This tree grows thrifty, has serrated leaves and large flowers, and it is one of the most extraordinary bearers, so that often the fruit is quite small; but when properly thinned it is of good medium size, and beautifully colored, with pale greenish white, striped with red on the sun side. Its flesh is rich, juicy, and of the finest flavor; but when left to over-bear it is very small and poor; ripe about the middle of August.

73. *Scarlet Admirable.*—This I received for a freestone. It is a thrifty growing tree, with serrated leaves and large flowers, and is one of the greatest bearers. It is of medium size,

greenish white, with a marbled red cheek, sweet and pleasant, but not one of the finest; and as there are so many larger and finer kinds ripening with it, it is not worthy of attention; ripe early in August.

74. *Washington.*—This tree grows thrifty, has globose glands and small flowers. The fruit is large, rather oblong, of a pale greenish white color, with a red cheek next the sun, more or less according to exposure. The flesh is rich, juicy, fine-flavored and excellent, and it bears well, and ripens about the middle of August.

75. *Washington, C.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is rather large, of a pale yellowish white color, with some touches of red next the sun. The flesh is rich, very juicy, fine flavored and excellent; and though not one of the largest, is one of the finest of aliens, and ripens about the 20th of August, and it deserves to be generally cultivated as it is one of the best bearers.

76. *Late Red Magdalen.*—This tree grows thrifty, has globose glands and small flowers. The fruit is very large, nearly round, of a pale greenish white color, with a red cheek that often covers most of its surface. Flesh rich, juicy, and excellent, and the fruit, which is one of our noblest; ripens about the 20th of August, and bears well.

77. *Carpenter.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large, a little oval in form, of a greenish white color, with some touches of red next the sun; flesh rich, juicy and fine. The tree bears well, and the fruit ripens about the 20th of August.

78. *Crawford's Late.*—The tree grows thrifty, has globose glands and small flowers. The fruit is very large, nearly round, of a yellow color, with a red cheek; flesh rich, juicy and excellent. The tree bears well, and the fruit ripens about the 20th of August, and is one of our noblest peaches.

79. *Red Cheek Melocoton.*—This is a thrifty growing tree with globose glands and small flowers. The fruit is rather large—rather oblong, of a yellowish color, with a red cheek; flesh rich, juicy and excellent. The tree bears well, and the fruit ripens about the 20th of August.

80. *Nivitte.*—This tree grows thrifty, has globose glands and small flowers. The fruit is rather large, round, of a greenish white color, with a touch of dull red next the sun; flesh rich, juicy and excellent, and the tree is a good bearer, but the fruit cracks bad in wet weather; ripe middle of August.

81. *Late Admirable.*—This tree is also of thrifty growth, has globuse glands and small flowers. The fruit is rather large, nearly round, but slightly lengthened; color pale greenish white, with a touch of dull red next the sun; flesh rich, juicy and excellent. The tree is a great bearer, and the fruit ripens about the 20th of August.

82. *Green Catharine.*—This tree grows very thrifty, has uniform glands and small flowers. The fruit is rather large, round, of a pale green color, sometimes a little touched with red next the sun; rich, juicy and fine. It is an abundant bearer, and the fruit should be thinned in overbearing seasons, then it will be beautiful and excellent. Though it bear exceedingly full with me this wet season, it ripened all its crop well, whilst many others rotted bad. It ripens the middle of August.

83. *Large Newington C.*—This tree grows thrifty, has globose glands and small flowers. The fruit is large, round, of a white color, with a little touch of red next the sun; flesh rich, juicy, sweet and excellent. The tree is a good bearer, and the fruit ripens about the 20th of August.

(To be continued.)

Miscellaneous.

Corn Culture.

It is passing strange that farmers have violated, from time immemorial, and still violate those laws of the corn nature so plainly and strikingly expressed by the growth and yield of the crop, viz: The necessity of air and space; the need of invigorating presence of the atmosphere about the roots of the stalk, and of unobstructed room for the springing of the tender stem and the swaying of its green and spreading leaves. This may, however, be accounted for by the fact that where corn is a staple the soil is very fertile and yields the agriculturist a fair harvest even though he crowd his hill close together.—In such countries the soil is also of a caloric na-

ture, and the consequence is that the seed may be placed deeper in the ground, without danger of rotting or of failing to germinate, than where it is colder and therefore less active. From this we may gather why it is that, as a general error, we plant our corn too thick and too deep, our notions of corn growing having been derived from the example set us by warm and second regions, where the raising of the crop is attended by but little difficulty. But even there, I opine, it would be better to bury the seed not quite so deep, and to give the breezes a freer circulation among the stalks. Where the soil is thin and inactive, it is an absolute requisite of success that these rules of depth and space be strictly observed. I have raised very good corn on land where the crop had failed upon repeated trials in the usual way of planting deep and close, by doing opposite, and by keeping the ground loose about the roots so that the warm air could penetrate to germ. When the stalk is five or six inches in height, it is better to lay bare the system than to draw ground about it.

All this is natural and obvious. A grain of corn planted eight or ten inches under ground rarely if ever shows any signs of its having germinated upon the surface. On the contrary, we often see the green blade of the cornstalk shooting up from the crevice of a rock, or from the rift in the hole of a fallen tree. The green vegetation that makes glad the summer earth loves the permeating air and the warming sunshine, and corn is one among them.—*Agriculturist.*

☞ The superiority of American inventive genius, not only over that of our English progenitors, but indeed of all other nations has become too tangible to be disputed. It was notorious at the World's Fair in London, that the Americans far outstripped all others in the useful inventions which they supplied. We beat the English in vessels, railroads, telegraphs and manufactures by power. We are beating them in the scientific arts of Chemistry and Medicine, as we have long beat the rest of mankind. A new and practical proof of this assertion is shown in the fact that the practical remedies of the allied armies of the East are furnished from the laboratory of our own countryman. Dr. J. C. Ayer, of Lowell, is filling orders for immense quantities of his Cherry Pectoral and Cathartic Pills, for both the land and sea forces in Turkey. His medicines have been tried and approved by those in power who have found them the most reliable which they could procure for the exigencies in which they are to be employed.—*N. Y. City Times.*

Medical Testimony cannot be Controverted.

☞ One of the most startling cases is narrated of Dr. McLane's Vermifuge by Dr. John Butler, of Lowell, Trumbull Co. Ohio. The case was that of a young lady who had been very sick for *eight years*, and had consulted a number of physicians, who had treated it as one of Prolapsus Uteri. Dr Butler was then called in, and for a time believed with his predecessors that it was a case of Prolapsus. He, was, however, soon forced to the conclusion that his patient was suffering from worms, and after much persuasion, prevailed upon her to take two doses of Dr. M'Lane's Vermifuge. This medicine had the effect of removing from her a countless number of the largest size. After she passed them, her health immediately returned. She is since married, and continues to enjoy excellent health.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa.** All other Vermifuges in comparison are worthless. Dr. M'Lane's genuine Vermifuge also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Dr. M'Lane's Liver Pills.

☞ This great medicine has supplanted all others for the cure of diseases of the Liver. Its effects are so salutary and speedy, and at the same time so perfectly safe, that it is not surprising it should supercede all others Invented by a very distinguished physician of Virginia, who practiced in a region of country in which Hepatis, or Liver Complaint, is peculiarly formidable and common, and who had spent years in discovering the ingredients and proportioning their quantities, these Pills are peculiarly adapted to every form of the disease, and never fail to alleviate the most obstinate cases of that terrible complaint. They have justly become celebrated; and the researches of Dr. Mr. M'Lane have placed his name among the benefactors of

mankind. No one having symptoms of this formidable complaint, should be without these invaluable Pills. Have you a pain in the right side, under the edge of the ribs, which increases with pressure—unable to lie with ease on the left side—with occasional, sometimes constant, pain under the shoulder-blade, frequently extending to the top of the shoulder? Rely upon it, that although the latter pains are sometimes taken for rheumatic, they all arise from disease of the Liver; and if you would have relief, go instantly and buy a box of Dr. M'Lane's Liver Pills.

☞ Purchasers will be careful to ask for **Dr M'Lane's Celebrated Liver Pills, manufactured by Fleming Bros. of Pittsburgh, Pa** There are other Pills purporting to be the Liver Pills, now before the public. Dr. M'Lane's genuine Liver Pills, also his celebrated Vermifuge, can now be had at all respectable drug stores. **None genuine with out the signature of** FLEMING BROS

The Triumph Complete.

Another perfect cure of Epilepsy by Dr. Hance's Epileptic Pills.

DURANTS NECK, Perquimans Co., N. C., Oct. 1st, 1855.

Dr. HANCE—Dear Sir;—Having been afflicted with falling fits for some years past, I determined to give your Pills a trial, (advertisement of which I saw in some of the papers,) and continued to use them for some months, until I was entirely cured. I believe them to be a first rate article; and since I have used them, I have not had one attack, and am now in the enjoyment of good health

I am, very respectfully,
Yours, &c.,
JONATHAN J. JACOBS.

P. S. The Pills were recommended to me by Mr. Nathan Newby, of this county, to whose address you sent them.

These Pills, besides curing Epilepsy, are a specific for all modifications of nervous disease. Price $3 per box; two boxes for $5; twelve boxes for $24. Persons enclosing a remittance will have the Pills sent them through the mail, on its receipt. For sale by SETH S. HANCE, No. 103 Baltimore street, Baltimore Md., to whom orders from all parts of the Union must be addressed.

Table of Contents.

Analysis of Swamp Mud from Cumberland Co...114
Analysis of a Marl from New Hanover county....114
Bush your Tomatoes.....111
Culture of Carolina Rice 97
Creosote for Warts.....108
Clover.....111
Corn Culture.....120
Descriptive Catalogue of Peaches.....118
Education of Farmers.....112
Exchanges.....115
Fancy Lop-Eared Rabbits, (cut).....109
Guano Convention, &c.....117
Kine, Quinine, Quinine.....116
Migration of Plants.....108
Manure Heaps.....108
Medical Notices.....121
North Carolina Tea.....103
Plan of an Agricultural School.....104
Potatoes.....109
Peach Worm..... 11
Raising Grass..... 117
Shrubbery Planting.....109
To improve the Breed of Milch Cows.....110
To destroy Vermin 111
To protect seed from field Mice.....113

JOHN N. GORDON,
Grocer and Commission Merchant and Dealer in Metals.

14th Street, near the Exchange Hotel,
RICHMOND, VA.

May, 1856. 3.—tf.

TO THE FARMERS OF THE OLD NORTH STATE.

I OFFER FOR SALE THE FOLLOWING named Young Bulls bred on my farm at Madison, New-Jersey; all of them will be fit for service at twelve months old. They are of very fine size, in good condition, and are out of my best milking cows, by my *premium* Short Horn Bull Madison. "Morris" calved May 12 1855 "Essex" July 29, 1855. "Victor" Sept. 15, 1855 I will deliver them in New-York city, and attend to shipping without charge for. "Morris"—Forty dollars. "Essex"—Thirty dollars. "Victor" (very fine) Forty dollars any time before the first of May.

The use of these animals would increase the size and weight of your stock from one fourth to one-third the *first* cross, and would also increase the milking properties of the cows, very considerably. Farmers who will not incur the expense of a full blood male, will find this a rare opportunity to improve their stock without a heavy outlay—also.

For sale A thorough bred Ayrshire Cow from imported Stock. Price one hundred and twenty five dollars Also two Superior North Devon Cows full blood will calve in about six weeks one at 175 one at $250. Orders for stock promptly executed.

ALFRED M. TREDWELL.
Union Agricultural Warehouses and Seed-Store
23 Fulton St., New-York.
April, 1856. 2t.

RINGLETS! RINGLETS! RINGLETS!

CURL YOUR HAIR.

AFTER MUCH STUDY, TOIL AND EXPENSE, I have discovered the secret of making the most straight, uncouth and coarse-looking hair, either to CURL or WAVE, at the option of the individual, in the most graceful manner, for life; thus enabling persons greatly to improve their appearance. Only three applications of my preparation are necessary. The preparation, which is not only perfectly harmless to the skin and hair, but renders the latter permanently silky and glossy, does not cost more than *fifty cents*, and the materials of which it is composed can be bought anywhere. I will send the RECEIPT for making it, to any person who forwards me ONE DOLLAR, by mail, pre-paid. Address

PROFESSOR H. N. ROWLAND,
Practical and Analytical Chemist, Philada., Pa.

☞ The RECEIPT and one bottle of the PREPARATION, sent free by mail, for $2. 10tf

NEWBERN AGRICULTURAL WARE-HOUSE.

Horse Powers and Threshing Machines.

WE would call attention to the following letters in regard to the THRESHING MACHINES sold by us:

SPRING HILL, Lenoir County, N. C.

William H. Oliver & Co.

Gentlemen:—I purchased last year one of Flicking er's Portable Horse Powers, Grain Threshers and Separaters, (same as advertised for sale by you) and am much pleased with it. I threshed out my Wheat and Rye crops with it last Summer and can recommend it as being one of the best Machines I ever saw. Farmers who wish to purchase need have no hesitation in doing so, as they cannot help from being pleased with its operations. With four horses or mules it will thresh 20 bushels of Wheat per hour. It requires two hands to feed the thresher, and one or two to carry the straw out of the way. The Separater separates the grain from the straw and does the work of two hands. It is so easily carried from one field to another, and can be put to work in a few minutes, and not liable to get out of order. The horse power will answer to drive a Cornsheller, Straw Cutter, Corn and Cob Crusher, &c., &c. JESSEE LASSITER.

SWIFT CREEK, Craven Co., Dec. 1, 1856.

Messrs. William H. Oliver & Co.

Gentlemen: The Wheat Thresher and Horse Power I purchased of you, worked to my entire satisfaction. To give you some idea of the work it will perform, I timed it and found that it threshed out a stack that made 18 bushels clean wheat in 27 minutes, and during that time the Machine had to be stopped once or twice, so as to move the Thresher, on account of the hands stretching.

Respectfully,
BISHOP E. DUDLEY.

Mr. William A. Pugh of Pitt County, also writes us that he is much pleased with one of the same Machines, purchased from us. He writes that he threshed out 65 bushels of wheat in two hours.

Mr. Edward Carman, of Hookerton, Greene County, writes to us, that the Threshing Machine sold him fully came up to the recommendation we gave it. He says he has threshed out about 220 bushels of Wheat with it. Can thresh 300 bushels per day, and is much pleased with it.

NEWBERN, June 3, 1856.

Messrs. William H. Oliver & Co.

Gentlemen: Last Summer I purchased of you, one of your Horse Powers and Threshers for my plantation, in Hyde County. I regret that I am not able to speak of its work from personal observation, but my overseer in whose judgment I have great confidence, gives me a very favorable account of the Machine. Our Wheat crop was small, our Oat crop nearly two thousand bushels, both were threshed with the Machine. I am also much pleased with the Reading Corn Sheller (with Fan attached,) purchased from you. Yours very respectfully,

JOHN R. DONNELL.

GREENE COUNTY, N. C.

Messrs. William H. Oliver & Co.

Gentlemen: The Wheat Thresher and Horse Power purchased of you last spring has worked to our entire satisfaction. We have threshed out of our own and neighbors' wheat, nine six hundred bushels. It will thresh with ease two hundred bushels per day. We recommend them as a first rate Machine.

Very respectfully,
THOMAS HUGHES.
NATHAN EDWARDS.

KINSTON, Jan 7, 1856.

Messrs. William H. Oliver & Co.

Gentlemen:—I am much pleased with the Horse Power and Thresher purchased from you, and would recommend them as a first rate Machine.

Respectfully, JOHN A. PARROTT.

☞ A number of the above machines kept constantly on hand and sold at Baltimore prices.

☞ To prevent disappointments Farmers who intend purchasing from us will please send in their orders as soon as possible.

GRAIN CRADLES.

Made with four to six Fingers, with best quality Scythes attached.

We would particularly call attention to an improved Grain Cradle, the pattern of which was gotten up by one of our most experienced farmers, and sent on by us to the manufacturers. They are particularly adapted for cutting short grain, as by a peculiar bend in the sneath, the person using them can, without stooping, cut the straw very near the ground. A supply of them, also several other kinds constantly on hand.

REAPING AND MOWING MACHINES.

We will furnish McCormick's, Manny, or any other Reaping and Mowing Machines at Manufacturers prices.

One of McCormick's Mowers and Reapers daily expected.

Every variety of Agricultural Implements, Castings, Fertilizers, &c., &c., &c., constantly on hand and sold at the lowest prices.

Fifty ton of Central American Guano just received on consignment which we are selling at $4 per ton.

☞ An Illustrated Catalogue of the various Implements and Machines sold by us will be furnished on application.

WILLIAM H. OLIVER & CO
COMMISSION MERCHANTS,
NEWBERN, N. C.

☞ Strict attention given to the sale of Country Produce, also to Shipping and forwarding Goods.

May 1

ATKINS' AUTOMATON:

OR,

SELF-RAKING REAPER AND MOWER,

BEST MACHINE IN USE.

1 (the first) used in 1852.

40 used successfully in 1853.

300 in twenty different States in 1854

1200 in all parts of the Union in 1855.

3000 building for the harvest of 1856.

THERE ARE SIX GOOD REASONS FOR this unparalleled increase and great popularity: 1st. It is strong and reliable, and easily managed. 2d It saves the hand labor of Raking. 3d. It saves at least another hand in binding. 4th. It saves shattering by the careful handling in raking; besides, the straw being laid straight, it is well secured in the sheaf, and does not drop in the after handling, and the heads are not exposed in the stack, so that the GRAIN saving even exceeds the LABOR saving. 5th It is a good Mower, being one of the best convertible machines in use. 6th. It has a knife that does not clog.

Its other excellencies, too numerous to mention here, are fairly given in the circulars. Its intrinsic worth is also attested by the award (mostly in only 3 years) of

OVER 70 FIRST PREMIUMS!

PRICE.—REAPER AND MOWER, $200.—$75 on its receipt, $75 first September, and $50 first December. Price of SELF-RAKING REAPER only $175 Considerable saving in freight to those at a distance who order prior to 1st March; also liberal discount for advance payment.

To secure a Machine, order immediately. Though so little known the past season, and none ready for delivery till 1st May, yet not two thirds the customers could be supplied. The reputation of the Machine is now widely established, so that THREE THOUSAND will fill as nearly supply the demand as twelve hundred did last year, and we shall also be selling four months earlier.

☞ Order early, if you would not be disappointed.

PAMPHLETS giving IMPARTIALLY the OPINIONS OF FARMERS, together with orders, notes, &c., mailed to applicants, and prepaid.

☞ Write to us at CHICAGO, (Ill.,) DAYTON, (Ohio,) or BALTIMORE, (Md.,) which ever is nearest to you.

J. S. WRIGHT & CO.

"Prairie Farmer" Works, Chicago, Dec. 1st, 1855

1—4m.

OUR CATALOUE OF AGRICULTURAL BOOKS,

COMPRISING SEVENTY FIVE DIFFERENT BOOKS ON AGRICULTURE,

Will be sent postage free to all who will favor us with their name and address.

Among the books recently published by us are:

CHORLTON'S GRAPE-GROWER'S GUIDE. 60c.

REMELIN'S VINEDRESSER'S MANUAL. 50c.

CRANBERRY CULTURE. 50c.

STRAWBERRY CULTURE. 50c

ELLIOTT'S AMERICAN FRUIT-GROWER'S GUIDE $1 25

THE STABLE BOOK. $1.

BOUSSINGAULT'S RURAL ECONOMY. $1.25.

THOMPSON ON FOOD OF ANIMALS. 75c.

PRACTICAL LAND DRAINER. 50c.

For Sale by all Booksellers, or sent by us free of postage on receipt of price.

C. M SAXTON & CO.,

Agricultural Publishers,

Y.

LIFE PRESERVING

PATENT SWINGLETREE.

THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed, with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached to it. It is a cheap safe, and certain protection against danger. It can be attached to old or new vehicles.

☞ Notice is hereby given, that any infringement on this Patent, or any imitation, or attempt to make or use by any modification, this Patent Swingletree in any of the counties above enumerated, the person or persons so offending will be prosecuted to the full extent of the law, in the U. S, Courts at Washington.

P. P. WILLIAMS & CO.

Raleigh, Feb. 14, 1856.

FARMER'S HALL,

RALEIGH, N. C.

The subscriber is general agent for the sale of Agricultural Implements and Farming utensils, Field seeds, Fertilizers, &c. &c. Almost all the articles brought to the late Fair are kept on sale and are offered at manufacturers prices with no cost of transportation, as they were brought free by the Railroad.

There is also a new fire proof Ware House on the lot, in which all articles on consignment are stored. The following are some of the articles brought to the late Fair: Horse Powers, Wheat Fans, Corn Drills, Field Rollers, Corn and Cob Crushers, Harrows, Cultivators, and Plows of every size and description.

JAMES M. TOWLES.

GOTTSCHALK'S MUSIC.

WE have just published the "Marche de Nuit," and "The Last Hope," which have been such great favorites and had such wonderful success at Gottschalk's late Soirees. They are produced in the best style, and exactly as played by the composer.—Where the passages are difficult there is an extra stave for the hand, thus bringing them within the capacity of performers of medium ability "The Last Hope" is altogether different from an old edition of the same work Inquire for Hall's new and only correct edition. In press, "La Serenade," ballad; also, new editions of "Souvenir d'Andalousie," "Jota Arragonaise," Jerusalem," fantaisie, and other favorite pieces.

WM. HALL & SON,

No. 239 Broadway, N. Y.

May, 1856. tf.

Book Binding.

JOHN H. DeCARTERET & SON.

RALEIGH, N. C.

ARE still carrying on the BOOK BINDING business in all its branches at the old stand over "Turner's N. C. Bookstore."

Their increased facilities will enable them to execute the binding of Periodicals, Newspapers, Music, &c, with promptness and dispatch, at New York prices.

Books sent to them from any part of the State, with directions, will be bound in any style desired, boxed and sent back without delay. Address

JNO. H. DeCARTERET & SON,

Raleigh, N. C.

May, 1856. tf.

H. D. TURNER,
GENERAL BOOK AGENT.

No. 1 Fayetteville Street, Raleigh, N. C.,

PUBLISHER OF THE

SUPREME COURT REPORTS OF NO. CA.,

Has for sale, in quantities or by retail, an extensive assortment of Books and Stationery, Comprising Greek, Latin, French, Spanish and English Books; School Books; Blank Books; Juvenile and Toy Books; Miscellaneous Works; with all the New Publications as they issue from the Press: also a large assortment of Stationery and Fancy Articles.

SCHOOL BOOKS.—All the different kinds o. Primers, Spelling Books, Reading Books, Grammars, Arithmetics, Geographies, Atlases, Histories, Dictionaries, &c.; also Works on Astronomy, Algebra, Chemistry, Philosophy, Mathematics, Surveying, Geometry, Botany, Book-keeping, Rhetoric, Mensuration, Trigonometry, Geology, Mineralogy, Cookery, Farming, Gardening, Medicine, Theology, Penmanship, Architecture, &c., &c. He has always on hand the Standard English Law Reports and Digests, and every Treatise on Particular subjects; together with the various State Reports and Digests, and a general assortment of Law Books of every description.

BLANK BOOKS.—Ledgers, Journals, Day Books, Invoice, Cash, and Letter Books, Receipt and Bill Books, Memorandum, Bank and Pass Books, Ciphering and Writing Books.

RELIGIOUS BOOKS—Family, Pocket, and School Bibles, Testaments, Hymn Books, Prayer Books, and various religious works, by approved authors.

SACRED MUSIC BOOKS.—Piano Music, Music Paper, and Musical Instruments.

STATIONERY AND FANCY ARTICLES.—Consisting of Foolscap and Letter Paper, Note, Folio Post and Drawing Paper, Morocco, Tissue, Pith, Tracing and Marble Paper; Knives, Steel Pens, Quills, Wafers, Sealingwax, Pocket Books, Albums: Ink Powder, India, Indelible, Japan, Black, Blue, and Red Inks; Prints Gold and Silver ever-pointed Pencils, Seals, Wafer Stamps, Sand and Sand Boxes: Scrap-Books, Visiting Cards, Card Cases, Gold and Silver Paper, Inkstands, Slate and Slate Pencils, Lead Pencils, Bristol and Ivory Boards, Chess Men, Maps, Battledores, Rules, India Rubber, Carmine Saucers, Newman's, Reeves's, and American Water Colors, &c.

N. B.—BOOKBINDING done, in all its various forms, with neatness and dispatch.

☞ GARDEN-SEEDS.—To be had at the North Carolina Bookstore, Garden-Seeds, warranted fresh and good, crop of 1855, selected from the most approved Seedsmen and Gardeners in the Northern Country.

February, 1856. tf

MOWING AND REAPING MACHINES.

ALFRED M. TREDWELL invites the attention of the Farmers of North Carolina to his arrangements for supplying Mowers and Reapers to that State.

Parties desiring information will please address him, stating the kind and amount of work they want a Machine for, and their letter will meet with prompt attention.

The machines most suitable for their wants will be kept constantly on hand, but parties wanting a Machine would do well to order early.

Having succeeded to the business in Agricultural and Horticultural Implements, Machinery, Fertilizers, &c; heretofore conducted by Messrs. Ralph & Co. at No. 23 Fulton street, he is prepared to furnish goods of his own make, of good quality and at low prices. A fine assortment of goods in the line always on hand.

In connection with extensive farming operations for some years past, he has given much attention to the raising of Short Horn, North Devon and Ayrshire Cattle and other fine stock, and now offers to parties wishing to purchase stock, the advantage of his knowledge and experience

Union Agricultural Warehouse and Seed Store No. 23 Fulton street, (near Fulton Market) New York City. April, 1856.

FARMING IMPLEMENTS.

Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete assortment of the most approved Farming and Horticultural Implements, of good quality and at low prices.

For sale by R. L. ALLEN,
189 and 191 Water Street, N. Y.

Jan. 1856

Newbern Agricultural Warehouse.

WILLIAM H. OLIVER, & CO.,

GENERAL COMMISSION MERCHANTS Newbern, N. C. Among our stock of Agricultural Implements may be found Ploughs, embracing some 40 different kinds.

Straw Cutters of all the most approved kinds, varying in price from 5 to 50 dollars a piece; Corn Shellers, from 7 to 60 dollars a piece; among which may be found Readings celebrated Sheller, capable of shelling and fanning at same operation 2000 bushels corn per day. Also, the verticle cylinder, double and single iron and wooden spout shellers.

Grain Fans from 15 to 34 dollars a piece, among which may be found the best Fans in use. Wheat Thrashers and Horse Powers complete, capable of threshing 300 bushels wheat per day. Cultivator's, Harrows, Horse Rakes, Horse Hoes, Improved Scythes and Cradles. Plough Castings of every variety: farmers Boilers and Cauldrons; Sausage Meat Cutters and Stuffers; Pure Peruvian and Mexican Guano; Chappells Fertilizer; Ground Plaster; Bone Dust; Prepared Guano, Ponduette, &c. &c..

Hoe & Co.'s Warrented Circular and other Saws; Patent Leather Banding; Best Bolting Cloth; Mill Machinery; Mill Stones; Water Wheels; Premium Georgia Cotton Gins, and Gin Gearing, &c., &c., &c., all of which will be furnished on the most liberal terms by WILLIAM H. OLIVER & CO.

Newbern, January 1, 1856.

Strict attention given to the sale of all kinds o country produce.

DR. STRONG'S COMPOUND SANATIVE PILLS

These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints Chills and Fever. Dyspepsia. Costiveness, Liver Complaint. Jaundice. Sick Headache. Scrofula. Salt Rheum. Fevers of all kinds. Loss of Appetite, Obstructed and painful Menstruation. and all lingering diseases.*

As a Female Medicine they act like a charm. and when taken according to the directions, they never fail to cure the worst cases of **Piles**, after all other remedies fail.

They purify the blood, equalize the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action; and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

Also

DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds. Catarrh. Bronchitis. Croup. Whooping Cough. Asthma. Consumption. Nervous Diseases, Dyspepsia. Costiveness. Erysipelas. Disease of the Heart, Inflammation and Pain in the Chest. Back and Side. and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food. in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant. Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups. Balsams. or Sarsaparillas, that were ever made: and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capable of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regular Appetite, and Strengthen the System.**

Price 25 cents per box. containing 25 doses of Medicine.

Call on the Agents who sell the Pills. and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of cures.

Both kinds of the above-named Pills are for sale in

Every Town and Village in North and South Carolina.

And at Williams & Haywood. Raleigh. N. C.
May 1855. 3 –

GREENSBOROUGH MUTUAL INSURANCE Company. The cost of Insurance on the Mutual plan is but a small sum, compared with a joint stock company. This company being located in the Western part of the State, consequently much the larger portion of the risks are in the West. very many of which are in the country.

The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting held to-day the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President*
S. G. COFFIN, *Vice President*
P. P. MCDONALD, *Attorney*
PETER ADAMS *Sec't & Treasurer*
W. C. DEMING, *General Agent*
PETER ADAMS *Secretary*
GEORGE T. COOKE, *Agent at Raleigh*

January 1, 1856. 29 - tf

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assured for life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $30, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

SLAVES are insured for a term of from one to five years, for two-thirds their value

All losses are paid within 90 days after satisfactory proof is presented.

DIRECTORS.

CHARLES E. JOHNSON,	WM. W. HOLDEN,
WM. D HAYWOOD,	WM. D. COOKE,
JOHN G WILLIAMS,	R. H BATTLE,
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CHARLES B ROOT,	SEATON GALES.

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Communications should be addressed, (post paid) to JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA

MU UAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst the following persons were elected Directors and Officers for the ensuing year:

DIRECTORS:

J. B. G. Roulhac, Raleigh.
Henry D. Turner, do.
J. R. Williams, do.
T. H. Selby, do.
C. W. D. Hutchings, do.
James F. Jordan, do.
James M. Towles, do.
James E Hoyt. Washington.
Alex. Mitchell. Newbern.
Joshua G. Wright, Wilmington.
John M Jones, Edenton.
W. W. Griffin, Elizabeth City,
F. F. Fagan, Plymouth
W N. H Smith, Murfreesboro'.
H B Williams, Charlotte
Geo. A Smith, Milton.
O F. Long, Hillsboro'.
Joseph White, Anson County
Josh Boner, Salem,
A T Summey, Asheville.

OFFICERS OF THE COMPANY.

J G B Roulhac, *President.*
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*

John R Williams, } *Executive Committee.*
T. H. Selby, }
C. W. D Hutchins, }

This Company has been in successful operation for more than 7 years, and continues to take risks upon all classes of property in the State, (except Steam

Mills and Turpentine Distilleries, upon favorable terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Country risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured

The average cost of Insurance upon the plan of this Company has been less than one third of one per cent. per annum, on all grades of property embraced in its operations.

All communications in reference to insurance should be addressed to the Secretary, post paid,

J. C. PARTRIDGE, *Sec'y.*

Raleigh, Jan. 9th, 1855.

Warrenton Female Collegiate Institute,

WARRENTON, N. C.

THE 30th session of this school will commence on the 3d of January next, prepared to give thorough instruction in all the branches of female education. Pupils received at any time. All charges from time of entrance

Terms per Session:

Board, washing, lights and fuel in rooms.....$60-00
English tuition,.....12 50
Music on Piano, Guitar, Melodeon, with use of instrument, each.....23 00
Oil Painting,.....15 00

Persons wishing further information, will please apply to GRAVES, WILCOX & CO

December, 1855.

THE LAWTON BLACKBERRY.

HAVING accepted from Mr. Lawton the agency for this remarkable Fruit we are prepared to furnish plants at the following rates.

Half a dozen plants. $3.
One dozen plants $5.
Fifty plants. $15.
One hundred plants. $25.

Carefully packed and shipped from New-York without extra charge.

The money must accompany the order.

C. M SAXTON & &O.,
Agricultural Book Publishers.
140 Fulton-st., N. Y.

AYER'S PILLS,

A new and singularly successful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousness, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but efficient Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the hearses all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characteras to forbid the suspicion of untruth.

Among the many eminent gentlemen who have testified in favor of these Pills, we may mention:

DR. A. A HAYES, Analytical Chemist, of Boston, and State Assayer of Massachusetts, whose high professional character is endorsed by the

HON. EDWARD EVERETT, Senator of the U S
ROBERT C. WINTHROP, Ex-Speaker of the House of Representatives.
ABBOTT LAWRENCE, Minister Plen. to England.
JOHN B. FITZPATRICK, Cath. Bishop of Boston.
ALSO, DR. J. R. CHILTON, Practical Chemist, of New York City, endorsed by
HON. W. L MARCY, Secretary of State
WM. B. ASTOR, the richest man in America.
S LELAND & Co., Propr's of the Metropolitan Hotel, and others.

Did space permit, we could give many hundred certificates, from all parts where the Pills have been used, but evidence even more convincing than the experience of eminent public men is found in their effects upon trial.

These Pills, the result of long investigation and study, are offered to the public as the best and most complete which the present state of medical science can afford. They are compounded not of the drugs themselves, but of the medicinal Virtues only of Vegetable remedies, extracted by chemical process in a state of purity, and combined together in such a manner as to insure the best results This system of composition for medicines has been found in the Cherry Pectoral and Pills both, to produce a more efficient remedy than had hitherto been obtained by any process The reason is perfectly obvious. While by the old mode of composition, every medicine is burdened with more or less of acrimonious and injurious qualities, by this each individual virtue only that is desired for the curative effect is present. All the inert and obnoxious qualities of each substance employed are left behind, the curative virtues only being retained. Hence it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

As it is frequently expedient that my medicine should be taken under the counsel of an attending Physician, and as he could not properly judge of a remedy without knowing its composition, I have supplied the accurate Formulæ by which both my Pectoral and Pills are made to the whole body of Practitioners in the United States and British American Provinces. If, however, there should be any one who has not received them, they will be promptly forwarded by mail to his address.

Of all the Patent Medicines that are offered, how few would be taken if their composition was known! Their life consists in their mystery. I have no mysteries.

The composition of my preparations is laid open to all men, and all who are competent to judge on the subject freely acknowledge their convictions of their intrinsic merits. The Cherry Pectoral was pronounced by scientific men to be a wonderful medicine before its effects were known. Many eminent Physicians have declared the same thing of my Pills, and even more confidently, and are willing to certify that their anticipations were more than realized by their effects upon trial.

They operate by their powerful influence on the internal viscera to purify the blood and stimulate it into healthy action—remove the obstructions of the stomach, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wherever they exist, such derangements as are the first origin of disease.

Being sugar wrapped they are pleasant to take, and being purely vegetable, no harm can arise from their use in any quantity.

For minute directions, see wrapper on the Box.

PREPARED BY JAMES C. AYER.
Practical and Analytical Chemist.
LOWELL, MASS.

PRICE 25 CENTS PER BOX. FIVE BOXES FOR $1.

SOLD BY

P F. Pescud and Williams & Haywood, Raleigh, N. C., May, 1856. 5—y.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. Cooke, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

EXECUTIVE OFFICE,
Raleigh, Jan. 26, 1856.

MR. WILLIAM D. COOKE has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr. C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

DEAR SIR:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
January 26th, 1856. WILL: A. GRAHAM.
WM. D. COOKE, ESQ.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass, the t tory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

N. B.—The copartnership heretofore existing between W. D. Cooke and Samuel Pearce in the proprietorship of the Map has been dissolved by mutual consent.

WILEY'S NEW FORM BOOK.

A NEW AND PRACTICAL FORM BOOK, containing forms of all those Legal Instruments important to be known by the People of North Carolina and designed for the use of *Justices of the Peace, Sheriffs, Clerks, Constables, Coroners*, compiled and arranged by C. H. WILEY, Esq., to which are added the Constitutions of North Carolina and of the United States. Published by Wm. D. Cooke, Raleigh, N. C.

Any person enclosing One Dollar in a letter, or that amount in Postage Stamps, will receive by return mail a copy of the work *free of postage*. *Be very careful to send for* "Wiley's New Form Book" and address WM. D. COOKE, Raleigh, N. C.

April, 1856.

THE NEW HOTEL,

WELDON, N. C.,

IS NOW OPEN for the reception of visitors. This Hotel is new and newly furnished, and the Proprietors will use every effort to keep a GOOD HOUSE, and render their guests comfortable.

They respectfully solicit a share of public patronage. T. J. JARRATT & Co.
Proprietors.

MEALS always ready on the arrival of the cars.
July, 1855. 33—tf.

WHITFIELD'S HOTEL,

WELDON, N. C.,

JOHN SMITH, Jr., Proprietor,

Formerly of Charleston, S. C.

MEALS, FIFTY CENTS.

Left hand side going South—Right hand side going North.
August 18, 1855, tf.

Thos. D. McDowell

THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher. B. S. HEDRICK, Agricultural Editor.

VOL. 2. RALEIGH, N. C., JULY, 1856. NO. 5.

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Miscellaneous.

An Address,

Delivered by JAMES L. GAINES, ESQ., *before the Moore County Agricultural Society, at Carthage, Moore County.*

MR. PRESIDENT,—I am called upon to address you on a subject which heretofore has been considered so plain as to need no investigation, and so well understood as to require but secondary attention. Almost every one supposed, to use a common expression, that he knew how to farm, and that it required but small knowledge, thought, or experience, to make him a proficient in that business; or, if he did not come to that conclusion, he looked upon agriculture as entirely beneath the scope of an intelligent and contemplative mind.

Time was when the soil of our State and county in its virgin and fertile condition would yield a rich return to any one who would even partially open the surface of the earth and deposite the seed of that product which was necessary for his support; for then, besides the rich and vegetable mould which had been untouched, there were comparatively few to be fed, and but little labor or skill was required to produce whatever was necessary for the comfortable support of man and beast, and history and experience attest the fact that, generally, men will not think or labor more than their necessities require. But, Mr. President, time and circumstances have effected a great change: Instead of this rich soil, the people of this generation must procure their bread from one comparatively barren and worn, and intead of the few who trod the soil which we occupy, the population has increased many fold. It results, therefore, as men must be fed and clothed, that we are called upon to look around us and devise a way how this greater number can be sustained, when the earth, from its exhausted condition, is capable of affording a smaller supply.

You can readily see then, Mr. President, why it is that the subject of agriculture is not the trite and neglected thing that it formerly was and why it is that instead of engaging the time and attention of ordinary minds, the best tal-

ents of the land are devoted to it. Men are now called upon to solve the startling problem, Can this worn and exhausted soil he so enriched and reclaimed as to he made capable of sustaining the increased and daily increasing population which throng it? This is the absorbing question of the times, and it has engaged the thoughts of many of our best citizens for some time past, and it is the one which I am called upon to consider-to-day. I am sorry to know that many a native son of North Carolina, upon slight reflection has answered this question in the negative and despairing of making a respectable provision for himself and family, much less of making a fortune, as we term it here, has bid adieu to the exhausted fields of his own old State, has left the place which held the ashes of his father and kindred, cut himself loose from the ties of blood and friendship which surrounded him, and has gone to distant lands, to shores then untrod, except by the beasts of the forest, and the savage wilder and fiercer than they, that he might seek and find that native fertile soil, such as his fathers found here: Thus, Mr. President, we have lost many of our best and most enterprising citizens; and as an evidence of the talent and merit of the people of our State, a remarkable number of those who have retired from among us to seek new and distant homes now adorn the societies in which they live and give stability to, and shed a lustre upon the institutions and character of their adopted States. But, Mr. President, there are a number of other, and I think by far the wisest, men who have come to quite a different conclusion. It is true, that necessity has kept many men here, as it has done everywhere; yet there are thousands of intelligent and thinking persons, who were able to leave if they would, that have reasoned themselves to the conclusion that North Carolina is the State for them, and that they will not, as a matter of interest, abandon her. It is true, they say that her soil has been greatly wasted and worn, but yet by a new and better system of cultivation, and the application of the various fertilizers, which it was in their power to procure, they could regain and improve what had been improvidently lost: and in this opinion they are supported by the former condition and present situation of many States North of us; for it is a fact, and it may surprise some of us, that in all old States and communities, where the land has been ruined by an improper system of cultivation, but has been reclaimed and enriched by a better, that there has been a greater and continually increasing product of the necessaries of life, and that increase has been such as to answer any demand that may be made upon it. If that is not so, how is it that the Northern States of our own Union, whose bounds are circumscribed, and whose soil was even originally comparatively sterile, are still able to sustain such a population as they have? How is it, in Europe, for instance in England, France, and other localities which I might mention, if necessary, that so vast a number of men are fed by the cultivation and enriching of so comparatively small an area of land? I say then, Mr. President, that those of our citizens who have determined to remain where they are, and improve, not only the physical but the intellectual and moral condition of the State, have acted wisely. Why so? Because they live under as good a government, to say no more, as they can find anywhere. Every variety of soil and climate is found within our limits, and there is no product of the earth necessary to our comfort, and, if we are not too fastidious, even to our luxury, which cannot be raised in some portion or other of the State. In a word, we live where, by industry, frugality, and skill, we may make ourselves independent, (and that is a word of great import,) to as large an extent as any people on the face of the earth.—And here I would remark that the value of land or of a section of country does not depend so much upon the great fertility of its soil for the rearing of any one valuable article, as upon its adaptation and the fitness of its climate to rear and produce the greatest variety of the indispensable necessaries of life. In this respect, I know of no State in the Union so advantageously situated as our own. She can make cotton for Virginia, and wheat and flour for South Carolina, and her tobacco will find a market anywhere: and she is dependent on no State for her corn and pork, although, greatly to her injury, she has not raised the latter article to the extent of her wants, which she might do, and which it is to her interest to do; and while she can thus raise all the great products of the soil, she can breed cattle and sheep to "cover a thousand hills." What more ought we, then, to desire? Nothing is naturally wanting to make North Carolina one of the

first States in the Union; and she would become so, if her citizens would improve the advantages they have, and cease to pine for imaginary benefits, which they are in the habit of supposing are peculiar to other lands, and not to their own. Their El Dorado is here. They must learn that time and labor are necessary to the attainment of every valuable acquisition; and, as an almost universal rule, what is easily got is of little value. There is a spirit rife in the land, which is more detrimental to our welfare and true and lasting interest, than perhaps any other: I mean, that desire which has seized the present generation to become speedily rich. It has proved an *ignis fatuus*, which has misled and ruined many a deluded follower: for, where one man, by any extraordinary success in speculation, or by any other than a regular and reasonable course of labor and profit, suddenly acquires a fortune, hundreds of others are disappointed in this aim, and mortification, chagrin, and ruin ensue; and instead of basking in the sunshine of fortune they are loaded with onerous debts; and I know that he who owes more than he can pay is wretched. The true and sure road to independence and fortune, is a steady and skilful application to some honest and useful occupation. It is God's purpose, and so he has spoken, that, by the sweat of your brow ye shall live; and, therefore, I conclude that no man has a right to a livelihood, much less to a fortune, who does not work for it. It is true that men rightfully, under the law, inherit estates; but if thereby they become drones in society, and do not exert themselves to improve what they have received, they are unworthy of their inheritance —they are like the foolish man in scripture, who hid his talent. I ask my audience to look around them and show me, if they can, who has usefully and skilfully labored and refrained from pernicious practices, who has ever failed.

And here I will remark, what I have always said in private, that no man in this State, need be at a loss for a vocation. If he is disposed to labor for his living there is here a sure resource. What is that, do you ask? Let him procure a farm, such as his means will afford, cultivate it assiduously and practice frugality and temperance and he will succeed. Many men, especially young men, think that this method of proceeding is too slow. Some of them are afraid of the labor they must perform; and others, I am sorry to say, are ashamed of it, and conclude that a more agreeable, speedy, and perhaps honorable employment would be that of a merchant or merchant's clerk, or some one of the learned professions; but alas! experience points you to the fact many of these persons, who might have made useful members of society in their proper sphere, have failed of success in that which they have chosen.

A little reflection would teach us that the business of this life is regulated by demand and supply, and a man would be considered a fool who should carry coal to Newcastle. In like manner, will any one act unwisely who attempts to force business out of its legitimate channel. There is one great, but neglected pursuit—the cultivation of the earth;—and the truth is, that he who devotes himself to this, engages in the great business of life. Yes, it is *the* business of life; and if properly pursued, it will bring plenty upon the land and heap blessings upon the head of him who follows it. And when rightly considered, as a general rule, there is no more profitable business: its benefits and merits will expand, like the circular wave on the lake, when a pebble is dropped into it. The true agriculturist will grow daily richer, slowly at first, but by degrees faster. If he will improve his land, as he may, he is richer in that. He will be richer in the increasing number and improvement of his stock, and in many other ways incident to a well-regulated establishment.

And, as a matter of interest, we of the South have an advantage in what is termed our peculiar institution. I allude to that of domestic slavery, for capital invested in that kind of property increases faster than in any other way. Some Pharisaical abolitionist might bring me to task for introducing an element of this kind in speaking of profitable employments; but I have only to answer that this is an institution which was a part of our system long before I was born, and with the origin of which I had nothing to do, and about which, if I ever felt any compunction, I feel none now, when I consider that, independent of its sanction in the holy scriptures, there has existed in all ages and countries, in some form or other, the relation of master and servant, and that in no age or country does the fact of service and the obligation to serve so effectually secure to the servant protection, humane treatment, and othe

social enjoyments, flowing from an institution patriarchal in its nature and tendencies, as they do among us.

In another view of the profits of agricultural pursuits, you must remember that a farmer's profits are estimated after he has defrayed his expenses in feeding and clothing himself and those under his care, and in furnishing the means of prosecuting his business: whereas men engaged in most other pursuits declare their gains before they have counted their expenses; and very often it happens, when these are considered, in the end, ruin and bankruptcy ensue. Whatever balance a farmer has, after supporting himself, [and he need be dependent upon others but for few things,] he can lay aside as capital. Then, if you would be certainly prosperous and happy, cultivate the earth with skill and industry. In this employment you have few or no temptations to vice or dishonesty, and you are under no necessity to dissemble, equivocate, or resort to false pretences. You will not then be under the necessity of smiling in the face of a villain, and flattering the corrupt and vicious. You can at least be independent, and act the part, and fulfil the destiny, of a true man. While on this part of my subject I will ask you to consider what has been most in demand for years past, and what could be most readily disposed of at high and remunerating prices. Has it not been the produce of a farm? Why has this been so? The reason is, that men have turned away from this business to other pursuits. Lawyers and physicians may have wanted clients and patients, and merchants customers, but the farmer's wares found ready sale.

If you will not accuse me of arrogating to myself exclusive or superior knowledge on the subject, and I assure you I do not, I will now proceed to show how, in my opinion, the productions of our farms and plantations are steadily to be kept up, and indeed increased, so as to supply the wants of our increasing population: and this I admit is no easy matter, considering their present exhausted condition, and the necessity of supplying that fertility, which must necessarily be lessened every year, by the crops which are to be grown upon and taken from them: and in doing this I shall not descend to details, as time will not permit, but merely call your attention to what I consider some of the defects in our manner of tillage, and point out to you how our lands may be kept up and improved.

In the first place, then, as to our defective system of agriculture. We attempt to cultivate too much land. This is injudicious, for many reasons. The first that I shall mention is, that as we now farm, we never prepare our lands as they should be, before planting or sowing. If we would do more work before, we would have a much more easy and pleasant task after, as lands thoroughly prepared would require much less labor to make crops. When we have too much land planted, we are not able to repeat our ploughings as frequently as the good of the crops requires. We should plant generally as early as the seasons will permit, and let the intervals between the successive workings of our land be as short as possible; for when crops have lain too long without being worked, they are generally injured, and often ruined, when they are worked, by tearing up their roots, at an unseasonable time: and experience teaches me that it is better, if our lands are thoroughly prepared, to work our crops fast and well, and, to use a common expression, lay them by early. But when we attempt to cultivate too much we cannot do this. In this way we save a great amount of labor, and can appropriate a larger portion of land to pasturage, and keep our stock off our cultivated fields, which exhausts them as much as the growing of the crop, as there are no lands which can long remain fertile under the teeth and the hoofs of cattle. After we have thus thoroughly prepared and planted this less quantity of land, our next business is to apply to it all the manure which we are in the habit of scattering over and wasting upon a larger surface: for in every point of view it is better to make off one acre what we are in the habit of getting off two. If we adopt this method, we will not be under the necessity of cutting down as much of our woodland. Trees are valuable now for their timber, and will become more so every year: and besides this, they are valuable, if they can be made no better use of, for producing ashes—one of the best manures in the world—and by their foliage for producing the vegetable mould, without which land would be of little value: for it is certain that the rich surface of all good lands has been made by the leaves and other vegetable matter which have annually fallen and rotted on them. It is a

matter of great importance, then, that we should leave as many trees standing as we can, as a medium by which the elementary or mineral manures of the earth are extracted and throw upon the surface, in the way just mentioned, and also to furnish us with their leaves, to be thrown into our lots, where they can be tramped by our cattle, and mixed with other fertilizing matter. When a plantation is short of trees I look upon it as being stripped of its greatest value.

What next shall I call your attention to? It is the necessity of ploughing our lands deeper than we do. What results from deep ploughing? I answer, in the first place, better crops; and then our soil is not half so liable to be carried off by heavy rains, and our crops are not so much affected either by drought or too much wet: and in order that the soil should remain where nature has placed it, on the surface, the subsoil plough should be used: and this is one of the methods of thoroughly preparing land before it is planted, which I have adverted to above; and I deem it a matter of great importance, in breaking up land, that the clay, or poorer subsoil, should not be mixed with the surface, as by that process the growth of vegetation is greatly retarded.

What more, you will ask, must we do to improve our lands? I will tell you. Ditch them well where they are low and liable to be saturated with water: for the best soil in the world will not produce a crop if there is too much water in it. Some land necessarily requires what we term open ditches, while there are other places where blind ditches are used to great advantage, for you lose no land where they are used, and they, if well made, do not need cleaning out: And again, Mr. President, men find it absolutely necessary to resort to a system of ditching their hilly or undulating lands, to prevent the soil from being washed off: and I am fully satisfied that if this had been well done and kept up for years past, our farms would now be worth fifty or one hundred per cent. more than they are, and instead of the deep gullies, and barren surface which our uneven lands present to our view, they would now show to much greater advantage. The manner of ditching hill-sides, although somewhat tedious, is easy, the object being to form trenches on their sides, at proper intervals, with sufficient fall to convey off the water that collects, before it attains strength and volume enough to carry off the soil.

I will conclude this part of my discourse by calling to your attention the absolute necessity of procuring, by every means in our power, the various fertilizing matter to be applied as manures on our cultivated fields; for you must recollect that the strength has been exhausted by making on and gathering crops from them for nearly a century past: and you might as well suppose that animal life could be sustained without food, as that the soil could be kept in its original productiveness, without, by some means, restoring to it what has been taken from it: and in addition to what I have already said on this part of my subject, I will remark, that although we are not so situated in this section of the State, as in some others, as to have the advantage of lime and marl, which are thought to be of great value, yet every farm that has not been stripped of its trees, has on it the elements by which it can be sustained and kept up.

The two great sources of manure in this section are ashes and vegetable matter, in its various states; which should be collected, heaped up, and saved with the greatest care; and instead of clearing more land to be worn out, it would certainly be more to our interest to employ our time in the winter season—and at all times when we could—in collecting, from all sources, something to enrich the soil. Fill your barn-yards with leaves, and every other vegetable matter, and combine the heap you make with ashes, and you need no better manure; and you will be astonished, when you try, to find what an amount you can collect.—Besides the above, you have an inexhaustible source of a good manure on the creeks and branches which run through your plantations, consisting of the rich alluvial soil which has been deposited there, for a great length of time; all of which, if you carefully collect and apply to your crops, you will find greatly to your advantage; and finally, your endeavors to enrich your lands will be greatly aided by raising what we commonly term the field pea, which is believed—and my experience verifies that belief—to contain more renovating properties, and can be more advantageously used as a fertilizer, than any other plant grown in the South, and it has well been termed the clover of the South. Peas should be planted in every corn-field, for

I believe they interfere very little—if anything—with the growth or yield of the corn; and as they have a deep tap-root, they take up that which the corn does not call for. Besides their fertilizing qualities, they yield a most rich and valuable cereal—if I may so term it—with which every farmer may fatten the requisite amount of pork. I could expatiate largely on this branch of my subject, but I forbear.

Mr. President, what I have already said is applicable, for the most part, to the State generally, so far as I have had opportunities to know; but as I am addressing the Agricultural Society of Moore, the balance of my remarks shall be confined to her limits.

I am well acquainted with the men and the soil of Moore County, and I can truly say that in her men there is enough of native talent, and her soil is such as to yield a rich return to any of her citizens who will skilfully and industriously cultivate it: and although there are counties in the State which have a richer soil and more intrinsic fertility, yet I know of none, all things considered, that has the advantage of her. She is situated in that degree of latitude, and consequently has that quality in her climate which enables her to produce the greatest quantity of the valuable products of the land: and you will remember that I remarked before that such a soil and climate, capable of raising such a variety, gave more value to a section of country than its capability of growing, even to any extent, any one of these valuable products. In this respect what county has the advantage of Moore? With a proper system of agriculture, well carried out, her citizens need not be dependent for any of the great staples of the country. You cannot grow cotton to advantage; and all that is required to enable you to do so, is a thorough cultivation, and the application of certain manures to stimulate the earth to an early maturity; and this is thought to be necessary in parts of our State supposed to be most congenial to the growth of this valuable plant. It is acknowledged that the great necessary of life, corn, can be raised here to great perfection, and in sufficient abundance; and I know of no land where wheat can be grown with greater success than in the bottoms of Deep river, Richland and McLennan's creek, and in all the northern and north-western portions of the county.

I once supposed that the sandy lands of Moore were comparatively worthless, except for their timber; but experience and observation have taught me otherwise; for I find that persons who have turned their attention to the cultivation of these lands, and have tilled them properly, have been well remunerated; and I now think that the most desirable lands in the State are those with a sandy surface upon a firm clay subsoil. We are mistaken in the idea that manure sinks in sandy lands. It is true there is greater heat in these lands; and where there is not a clay foundation evaporation is more rapid. For this reason it is not wise to manure lands where the sand is of great depth; but there are enough of the sandy lands of Moore with a good foundation to keep you at work for a long time. The ease with which such lands are cultivated, is a consideration of great importance; and the stiffness of the soil of our best lands, in the interior of the State, constitutes a serious objection to them.

If the fire were kept off your sandy lands for a few years, instead of their naked appearance as to undergrowth, I am persuaded they would soon be covered with oak, dog-wood, and hickory, which would spring up in the surface-soil, made by the straw of the pine as it fell and rotted; for it is said that there is more fertilizing power in the straw of the pine than in oak leaves, which has been tested by the amount of potash produced from them when burned; but there is much less of the same element in pine than in oak wood. Such is the economy of nature, which every man, to be successful, ought to observe. Therefore keep your pines standing, that with their deep tap-roots they may carry up the elementary manure of the earth, and through their leaves annually shed it upon the surface.

I venture the assertion, that if the people of Moore County would cultivate their lands, enrich, and preserve them, by the rules of farming which I have laid down, as applicable to most parts of the State, there would be an ample amount raised within her borders, of all the necessary and valuable staples, and she might place herself upon a level with the most prosperous and favored counties in North Carolina. I believe Moore County, from her situation and her soil, is decidedly an agricultural county, and that she could best promote her interest by devoting all her energies to that pursuit;

and without assuming to myself the office of an officious adviser, permit me here to say, that I warn her citizens against the allurements of all other seemingly more profitable occupations.

I remember well when a large quantity of cotton was picked and packed a few miles west of this. Gold mines were discovered in the county, and men's minds became bewildered with the idea of becoming suddenly rich, and they neglected, and some abandoned, their farms. What was the result? They did not grow rich from the mines, and their farms, being neglected, ceased to yield them a support, and the public interest suffered.

Again, Mr. President, a turpentine mania seized the minds of some of your citizens, who engaged in that business, and neglected their farms; and what has been the result? You know better than I do. If they had stuck to their old pursuit, and followed that exclusively, as a general rule, I imagine they would have been substantially richer than they are.

You may cast your eyes over the whole country, and you will perceive that agricultural districts, purely, are the most substantially wealthy and prosperous; and, as the cultivation of the earth is the most agreeable business in the world, why should it ever be abandoned?

There is one county with which I am intimately acquainted—that is Anson—and the industry of her citizens, which is laudable. They have devoted themselves exclusively to agricultural pursuits, and thereby have become rich and prosperous. It is so with the agricultural portions of Richmond and Montgomery. Follow their example, and you will meet with similar success.

Moore County is not my native place, but was long my home, and I have ever felt a strong desire for her advancement; and if she will take advantage of her many facilities, and press forward with zeal and industry, her destiny is certain. And, Mr. President, Moore county has a goodly inheritance in many of the men who now live in her borders, and she has a right to be proud of those who were once her citizens, but who have now passed away. She has produced many good and gifted spirits, at whose feet I was raised, and for whom I have a grateful and affectionate remembrance. This is the land of McBryde, of the Martins, of Dowd, of McNeill, of Kenedy, of Dunlap, of Person, of Kelly, and many others worthy to be named, all of whom, if they had faults, were such as demand our charity, for they had virtues and qualities worthy to be imitated, and have left names of which those who come after them should ever be proud.

From Stewart and Allen's Stable Book.

Watering Horses.

The effects of cold water vary according to the quantity given, and according to the state of the horse. Two or three quarts will not do any harm, or at the most it will set the coat on end. If the horse is very hot, this small quantity is very refreshing to him, and may be given with great safety. If the day be very warm, and the horse kept in gentle motion, twice or thrice as much will do no harm, however warm the horse may be. Yet none should be given till one or two minutes after the horse is pulled up. Let him recover his wind for a minute before he drinks. A large quantity, say a pailful, of very cold water, to a horse at rest, not heated by exertion, may make him shiver, or it may produce pain in the belly, cramp of the bowels. Both the shivering and the cramp may be prevented by putting the horse in motion; a brisk walk or gentle trot. A horse much heated by exertion, which has produced copious perspiration, will drink more than a pailful, and the colder the water the more he will drink; if *he* shiver, founder may be expected in an hour or two. If the same quantity be given when the horse is getting cool, he is almost sure to take cramp in the bowels. So far as my experience goes, it appears that cold water is most dangerous, not when the skin is at its hottest, but when it is becoming cool after being warm. I have seen cold water produce a kind of rheumatism. The horse is stiff all over, and on one or more of his legs he is lame and cramped, and it is several days before he recovers. I have never known this happen except when the horse had drunk freely of cold water, and eaten grain at the time he was much heated; and in all cases he had been permitted to stand at rest. I remember only three cases of this kind, and it is possible the rheumatism might not be altogether due to the treatment, I suspect. This, however, a shivering fit, founder and spasmodic colic, are all the evils that cold water will produce. I have never seen it produce any other. Their treatment, their

symptoms, and results, it would be improper to describe; but it may not be very much out of my province to mention that shivering is prevented and cured by motion and clothing; and that cramp of the bowels may be cured by four ounces of sweet spirits of nitre, given in a pint of warm milk, with about a teaspoonful of ground ginger, mustard or pepper.

To prevent these the water must either be warmed, or it must be given oftener and in smaller quantity. A very thirsty horse should never be permitted to take so much as he pleases at one draught. A little, given at intervals of fifteen or twenty minutes, till his thirst is quenched, will prevent all danger, and the horse will take less upon the whole than he would take at first in one draught. I do not approve of chilled water for constant use. It makes the horse so tender that a very little cold water has a great effect upon him. It does no other harm. It need not, however, be given as it is taken from a deep well, or from a frozen pond. As a general rule, the temperature of the water should not be much above nor much below that of the air which the horse is breathing.

The quantity of water which a horse will consume in twenty-four hours; is quite uncertain. It varies so much, that one will drink as much as other two or three. It is influenced by the food, the work, the weather, and the number of services. While getting grass or soft food, the horse drinks less than while his food is all dry; those that eat much hay need more than those that eat little. The demand increases with the perspiration; horses at fast work, and kept in hot stables, need a large allowance, which must be still larger in hot weather. When water is given only twice a day, more is taken, or would be taken, than if it were given three or four times. Horses of slow, or not very fast work, may be permitted to take what quantity they please provided always that it be given before the horse becomes very thirsty. For other horses, those of very fast work, occasional restriction is necessary; and many of these are subject to habitual restriction.

Occasional restriction is necessary. When the horse is very thirsty, he will take more than he needs, and more than is safe. This I have already explained. Restriction is also necessary before fast work. In coaching stables the horses are watered about an hour before going to work. Should they be disposed to drink a great deal at this time, they are not permitted; half an ordinary pailful ought to suffice. Twice as much might do harm. It might impede the breathing, and produce purgation; yet, very often, it does neither. Given, however, immediately before starting, it is sure to do both. When the horse purges, his breathing becomes freer as he gets quit of the water. But especially on a long stage, the purging is very debilitating, and it makes the horse very lean in two or three journeys. Racers, it appears, receive no water on running days till their work is over, and they are even stinted the day before running. With hunters, the restriction is carried nearly as far, though not so generally. This practice has always been condemned by veterinarians, and in truth it seems of very doubtful propriety. But, notwithstanding what has been said against it, no proof has been produced to show that it is really a pernicious practice. It is, however, always censured as cruel and needless and erroneous.

Harvest Drink, Diet and Medicine.

We cannot do better at this approaching season of hard work, than republish the following, with slight additions, which we first published in the Planter for June, 1854.

"Mr. Blair Burwell, of Powhatan, called at our office this morning, and gave us the following recipe for a harvest drink:

Water, - - -	33 gallons.
Sharp Vinegar, - -	1 "
Molasses, - - -	1 1-4 "
Ground Ginger, - -	1-4 "

"This will last thirty hands until dinner time, when as much more may be mixed up to serve until night. It is carried to the field daily in a cart and moved about after the hands, each one of whom is limited to a cocoanut full at a time, always without ice—(they drink nothing else). He says that the Yankees fought on this mixture at Bunker's Hill, and he agrees if it kills a man, to be indicted for murder.

"For our part we see no harm in ice. We have used it regularly for fourteen years without any bad result, but on the contrary, we think, with benefits."

We know persons who have used it beneficially for a still longer period. A venerable friend of ours, recently deceased, assured us that he had used it for thirty years or more, and never without advantage. His plan was to carry out a barrel of ice in a cart, and keep the water tubs nearly filled with it. His theory, and we believe the true one, was that the ice acted as a tonic; and the hands could never overload their stomachs with it, because the water was kept so cold that they could never drink to distension.

Strong coffee should always be given at breakfast and at night.

No form of spirituous liquors should ever be used; and we who say it are not a "temperance man."

"Well cooked black-eye peas, fried onions and rice, the latter cooked in puddings, or in as many forms as you please, are the best vegetables."

Raw onions are also said to be an excellent food with those they agree with, and a friend recently mentioned to us a case of a negro who had never been able to stand the heat and fatigue of harvest, until he thought of supplying him liberally with raw onions, upon which he went through his work like a well trained four miler.

"Salted meats and fish, never fresh, and a plenty of red pepper, in every thing that it suits, boiled in the pod.

"For physic, the pills recommended two years ago by our friend Charles B. Williams, as follows:

Pulverised Opium,	18 grains	made into 24 pills.
" Red Pepper,	18 "	
Gum Camphor,	12 "	

To be taken when the first symptoms of cramp or diarrhœa appear—one then, and an additional one afterwards if necessary, according to the exigency of the case."

We have proved the efficacy of this repeatedly, and would as soon think of going into the harvest without a basket of tools.—*S. Planter.*

Buckwheat—Its Culture.

The domestic consumption of buckwheat has wonderfully increased, within the last fifteen years. At that time it was scarcely admitted into respectable society, the poor alone being the only consumers.

Now, the tables of the rich, the opulent, as well as of the poor, smoke with hot buckwheat cakes, all through the winter season.

The term Buckwheat is derived from the German Buckweitzen—"Beech-wheat"—from the resemblance to the seeds of Beech-mast. It is not properly a grain, but belongs to the family of *knotweeds*, of which there are twenty species in the Northern United States. It is said to be a native of China. Three species are cultivated: the Common Buckwheat, *Polygnum Fugopyrum;* Tartarian Buckwheat, *P. Tartaricum;* and Notch-seed Buckwheat, *P. Emarginatum.* There are, we believe, no varieties. The first named is the kind chiefly grown here; Italy raises the second, and China the last. Buckwheat is used for food in all the countries of Europe, except Great Britain. Owing to its quick growth it is adapted to great extremes of climate. The total crop in 1850 was nearly 9,000,000 bushels: New-York producing over three millions bushels: Pennsylvania over two millions; and Illinois one hundred and eighty-four thousand, five hundred bushels; Its has been grown in America for 150 years.

It contains about six per cent. of Gluten and Albumen; 60 per cent. of starch, and about 30 per cent. of woody fibre, gum, sugar &c. There is a close resemblance between the composition of buckwheat and rye. The flour of buckwheat is decidedly nutritious and its fattening qualities are higher than is generally supposed, making meal of the finest quality. It should always be ground or cooked before feeding. It is stated that if a drove of swine is "allowed to feed in a newly harvested buckwheat field the head and ears are attacked by an eruption, with intense itching, while the animal present all the symptoms of intoxication. In severe cases death ensues. So likewise the fresh grain fed whole in large quanties, disorders the bowels; but if ground or cooked, these symptoms are not observed. In the latter case the husk is passed into the animal entirely undigested. Further investigation is necessary to explain these phenomena."

As occasional feed, the straw of buckwheat is relished by all animals. It possesses one peculiar property,—if boiled it forms a *thick jelly.*

Buckwheat is some times sown for the purpose of plowing under as a green manure, but we do not admire it for this purpose—its excessive acidity rendering it greatly objectionable.

A crop which would produce 28 bushels of seed will furnish 12 cwt. of organic matter to the soil if turned under. The time to plow it in is when it begins to blossom.

The lighter class of soils are generally supposed to be the best suited for this kind of grain, but it will do well on any soil ordinarily. Once plowing and harrowing fit the land for seed; from two to three pecks of which are sown to the acre and harrowed in. It should be sown from the 20th to last of June and first three days of July.

In harvesting it is generally cut with a cradle or Reaper. Rake into bunches and with the rake and one hand set them on end and give the tops a twist. In this condition they are left until well dried, when they are drawn in and threshed as fast as drawn. A load should not be left standing more than two hours, the straw absorbs moisture with such rapidity that the grain is got out with much difficulty. If there is a prospect of continued fair weather at the time of cutting, it is a better plan to cure in swath and draw directly in taking up with a fork. The best modes of threshing, are with flail or with horses, though the late machines do the work very well.

The average yield is from 20 to 25 bushels per acre. It appears to depend much on the state of the weather at the period of plowing.

The legal weight of a bushel of Buckwheat, we think is 42 lbs.

The Law of Slopes.—The following is worthy of being stored in the memory: In France the high roads must not exceed 4 deg. 46 min. by law; in England 4 deg., or one foot rise in thirty-five. A slope of 15 deg. is extremely steep and one down which one cannot descend in a carriage. A slope of 37 deg. is almost inaccessible on foot, if the bottom be a naked rock or a turf too thick to form steps. The body falls backwards when the tibia makes a smaller angle than 43 deg. with the sole of the foot—42 deg. being the steepest slope that can be climbed on foot in a ground that is sandy. When the slope is 44 deg. it is almost impossible to scale it, though the ground permits the forming of steps by thrusting in the feet. A slope of 55 deg. to man is quite incessible.

Mange Ointment.—Take powdered aloes two drams, and mix with one ounce of turpentine, four of sulpher and six of lard.

Hints to Farmers.

Toads are the best protection of cabbage against lice.

Plants, when drooping, are revived by a few grains of camphor.

Pears are generally improved by grafting on the mountain ash.

Sulphur is valuable in preserving grapes, &c., from insects.

Lard never spoils in warm weather, if it is cooked enough in frying out.

In feeding with corn, sixty pounds ground goes as far as one hundred pounds in the kernel.

Corn meal should never be ground very fine, it injures the richness of it.

Turnips of small size have double the nutritious matter that large ones have.

Ruta Baga is the only root that increases in nutritious qualities as it increases in size.

Sweet olive oil is a certain cure for the bite of a rattlesnake. Apply it internally and externally.

Rats and other vermin are kept away from grain by a sprinkling of garlic when packing the sheaves.

Money skillfully expended in drying land by draining or otherwise, will be returned with ample interest.

To cure scratches on a horse, wash the legs with warm soapsuds, and then with beef brine. Two applications will cure in the worst case.

Timber, when cut in the spring and exposed to the weather with the bark on, decays much sooner than if cut in the fall.

Experiments show apples to be equal to potatoes to improve hogs, and decidedly superior for feeding cattle.

Wild onions may be destroyed by cultivating corn, ploughing and leaving the field in its ploughed state all the winter.

Attend to your Peaches.—The Alabama *Planter* says: A gentleman handed us yesterday the following, which may be of service to some of our readers. A friend of mine has just informed me of the success he met with by the application of charcoal to peach trees. A few years ago he had some fine peach trees in his garden which invariably had wormy fruit, and the trees were full of gum. When the fruit was about the size of marbles, he had the earth removed from each about two feet round and three inches deep, and filled with charcoal.—

The result was that the fruit grew to a fine size, free from worms, and every year since the fruit has been good, and the trees became healthy and free from gum, while two trees left without the charcoal continuo to bear wormy fruit and are unhealthy.

GATHERING THE PERFUME OF PLANTS.—The perfume of flowers may be gathered in a very simple manner, and without apparatus. Gather with as little stalk as possible, and place them in a jar, three parts full of olive or almond oil. After being in the oil twenty-four hours, put them into a coarse cloth, and squeeze the oil from them. This process, with fresh flowers is to be repeated, according to the strength of the perfume desired. The oil thus thoroughly perfumed with the volatile principle of the flowers, is to be mixed with an equal quantity of rectified spirits, and shaken every day for a fortnight, when it may be poured off ready for use. As the season for sweet-scented blossoms is now approaching, this method may be practically tested

From the Southern Planter.

HAMPTON, *April* 29, 1856.

Mr. Editor.—As the time is at hand for bugs to make their attack on Melon, Pumpkin, and Cymblin vines, permit me to make known, through your valuable paper, a remedy, a single application of which, put an immediate stop to the ravages, a host of them were committing on my vines, last Spring. The vines were sprinkled with water, well impregnated with the oder of coal tar. The bugs instantly rose from them, like a flock of black birds, and never returned. I had my Rutabaga plants, as soon as they came up, treated in like manuer, and no insect attacked them.

Very Respectfully, Yrs, &c.

G. W. SEMPLE.

GREEN TEAS.—The following are the principal kinds: Twankay, Hyson-skin, Gunpowder and Young Hyson.

Young Hyson is a delicate young leaf, called in the original language *Yu-tsien*, (before the rains,) because gathered in the early spring.

Hyson is from the Chinese word *He-tchene*, which means flourishing spring. This fine tea is gathered early in the season and prepared with great care and labor. Each leaf is picked separately and nipped off above the foot-stalk and every separate leaf is rolled in the hand. It is much esteemed for its flavor.

Gunpowder Tea is only Hyson rolled and rounded, to give it the granular appearance whence it derives its name. The Chinese call it *Choo-cha* (pearl-tea.)

Hyson-skin is so named from the Chinese term, in which connection *skin* means the refuse or inferior portion. In preparing Hyson all leave that are of a coarse, yellow, or imperfectly twisted appearance are separated and sold as *skin tea*, at an inferior price.

Twankay is the last picking of green tea, and the leaf is not rolled or twisted as much as the dearer descriptions. There is altogether less trouble bestowed on the preparation.

BLACK TEAS.—As soon as the leaf-bud begins to expand it is gathered to make Pekoe. A few days later growth produces black-leaved Pekoe. The next picking is called the Souchong. As the leaves grow larger and more mature they form Congoa; and the last picking is Bohea.

Bohea is called by the Chinese *Ta-cha*, (large tea) on account of the maturity and size of the leaves. It contains a larger proportion of woody fibre than other teas and its infusion is of a darker color and coarser flavor.

Congou, the next higher kind, is named from a corruption of the Chinese *Koong-foa*, (great care or assiduity.) This forms the bulk of the black tea imported and is mostly valued for its strength.

Souchong—Seaon-choong (small, scaree sort) is the finest of the stronger black tea, with a leaf that is generally entire and curly. It is much esteemed for its fragrance and fine flavor.

Pekoe is a corruption of the Canton name *Pak-ho*, (white down) being the first sprouts of the leaf-buds—they are covered with a white, silky down. It is a delicate tea, rather deficient in strength and is principally used in flavoring other teas.

SUBSTITUTE FOR CREAM IN TEA OR COFFEE.—Beat the white of an egg to a froth, put in a very small lump of butter and mix well; then turn the coffee to it gradually so that it may not curdle. If perfectly done it will be an excellent substitute for cream. For tea, omit the butter, using only the egg. This might be of great use at sea, as eggs can be preserved fresh in various ways.

Mulching with Living Plants.

At the discussions of the Fruit Grower's Society of Western New-York last winter, an intelligent and skilful cultivator advanced an opinion so obviously in error, and at the same time so commouly believed, that its correction seems to be required. He said, "I believe we can ruin a soil in a few years by leaving it exposed to the scorching rays of the sun, through the long summer months. I should prefer some root crop, and I think you would retain more in the soil by keeping it shaded, than you would lose by taking a crop from the ground. Let us have crops, if it is only to keep the ground shaded from the sun." We are not surprised that such opinions as this should be common. The surface of the earth is sometimes left bare —it becomes hard, and nearly as unsuitable for the growth of young trees as a pavement; and the few weeds that spring up do not make the case any better. On the other hand,—the ground is planted with carrots or potatoes, and the surface is kept mellow. The trees grow finely, and succeed decidedly better thau in the other instance. This is considered as indisputable proof that the *crop* benefited the ground. The fact is just the reverse. The hoeing and looseing of the earth, in cultivating the crop, has proved beneficial, the crop itself is detrimental. This is most amply proved on the one hand allowing a crop to grow, which receives no cultivation, as for example wheat or meadow; the injury to the trees has, in all cases, been found greater than in a bare, plowed field, that remains uncultivated. Nothing is more common than to lose half the young trees that are set out in a meadow or grain field. "Shading the ground" with the crop does no good. On the other hand,—repeated trials show that young trees set in ground on which *nothing* is allowed to grow but the trees, and which is repeatedly stirred, will sometimes nearly double the growth of those growing with potatoes or other root crop.

There is reason for all this. The first principles of vegetable physiology would lead to such a conclusion before a single trial was made. Plants not only withdraw nourishment from the soil, but they pump up through their stems large quantities of moisture, for the supply of the rapid evaporation which is going on through the leaves. The advocates for shading with growing plants would be surprised, should they examine the soil in which plants have grown, to find it dry and nearly destitute of moisture in time of drouth, while adjacent soil, kept bare but mellow, would show large quantities of moisture, if turned up to a proper depth. This contrast we have had occasion to observe in repeated instances. Plants will draw the water up from the soil and dissipate it in the air, several times faster than any evaporation can take place from a mellow surface. In a dry time, the celebrated Dr. Hale found that a bunch of grass threw off from its leaves enough moisture, in two minutes, to condense in drops on the inside of a glass under which it was placed, and to run down the sides. No bed of mellow earth could do this.

Many cultivators of young fruit trees have discovered by experience that a growth of weeds and grass is highly detrimental. But what essential difference there is between the growth of weeds and of any cultivated crop, so far as its influence on young trees is concerned, they appear never to have thought of. However, so long as trees are looked upon as a sort of fag end of the vegetable kingdom—that is, so long as they are expected to take the last chance in cultivation,—it is better to plant a crop of potatoes or turnips among them, for the sake of the good treatment which the root crop is sure to receive, although worth far less than the trees which are thus indirectly benefited.

Mulching—or shading the ground with *dead* vegetable matter, which can take nothing from the soil,—is a very different process from the objectionable practice we have spoken of. But one of the best kinds of mulching, is when the operation is performed with *pulverized earth*. It is quite as good as saw-dust and tan-bark, more easily procured, and more readily got rid of when the process ceases. The only difficulty is, the pulverizing process has to be occasionally repeated with the rake, hoe, or cultivator, in order to break the crust which gradually forms; while tan-bark and saw-dust do not form any crust; and this is the reason why the former is so often rejected by those who think the labor of pulverization an intolerable evil and are willing to expend twice as much in carting the saw-dust and tan.

Experiments,—tried in all imaginable ways; —and *observation*,—made so repeatedly and for so long a period, as to amount to actual de-

nonstration,– have established these simple ruths in the cultivation of young trees through he summer, namely, 1. The best and easiest of all ways to keep up vigorous growth and to prevent any loss,—to keep a clean, mellow surface, by the often repeated passing of the horse cultivator. No crop interfering, it may be done rapidly, easily and cheaply. 2. For those persons who think least of what costs them most, and *vice versa*, the next best mode is to cultivate root crops or such as require repeated hoeing. 3: Lower down the scale, but not at the bottom, is the practice of planting in bare or plowed ground, and leaving it unoccupied, taking no further care of either land or trees. 4. A sowed grain crop is still worse, but hardly worst of all, for the previous plowing of the ground has been enough to produce a slightly favorable effect. 5. Last of all, lowest in the scale, is planting in a meadow, where there is nothing whatever that is favorable; the roots below rot, the growth above smothers, the turf around imprisons, and the tree languishes and in most instances dies.

It would be worth thousands of dollars,—yes, hundreds of thousands, to the country at large, if the State Agricultural Society, or private individuals, could perform a few sets of experiments of the easiest and simplest kinds, and have them widely reported, showing the above-named results in their different grades. Let five rows of young peach trees be set out and treated as described, viz: One row in clean, constantly mellowed earth; the next in a crop of potatoes; the third in a bare uncultivated field; the fourth in wheat, and the fifth in a clover meadow. We shall venture to predict the average results; viz: The shoots on the first row will grow in a season three feet long; on the second one and a half feet; on the third six inches; on the fourth half an inch to an inch on such as live; and on the last none at all, three-fourths dying before any growth is made. We hope the trial will be made, and the results demonstrated and published.—*Country Gentleman.*

Gooseberry Mildew.—It is well known that mildew is so destructive to gooseberries in this country, that but few of the large and choice kinds every perfect much of their fruit, and as a consequence, one of the nicest of fruits is but little seen in our market, in a ripe state. The writer of the Calender for the Horticulturist, gives a very simple remedy, which if as good as represented, is well worthy of extensive application. The following is the remedy, and as we read it, merely requires the application once, "when the fruit is forming:"

Mildew may be prevented, by watering with soap suds, over the branches. A radical cure for this pest may be formed by mixing a peck of lime and a pound of sulphur, in ten gallons of water; let it stand and settle. A pint, in 4 gallons water, sprinkled over the bushes when the fruit is forming, will keep them clean; cover the ground with manure, and spread a small quantity of salt over it, to keep as much moisture as possible about the roots.

Mulching is undoubtedly a good thing, as it keeps the roots in a more uniform state as regards heat and moisture, and salt is recommended by several different writers just at this time. Our experience goes to prove that if planted under the shade of trees somewhat, they escape mildew, although the fruit is small. The fine show varieties of England are much more subject to it than the small rough kinds. The Whitesmith and Houghton, are perhaps the safest to plant.—*Country Gentlemen.*

Vanilla.—The vanilla, so much prized for its delicious flavor, is the product of a vine which grows to the top of the loftiest trees. Its leaves somewhat resemble those of the grape; the flowers are red and yellow, and when they fall off are succeeded by the pods, which grow in clusters like our ordinary beans; green at first, they change to yellow, and finally to a dark brown. To be preserved, they are gathered when yellow, and are put in heaps for a few days, to ferment. They are afterwards placed in the sun to dry, flattened by the hand, and carefully rubbed with cocoanut oil, and then packed in dry plantain leaves, so as to confine their powerful aromatic odor. The vanilla bean is the article used to scent snuff, flavor ice-creams, jellies, etc., etc. The plant grows in Central America, and other hot countries.

The Eye.—An excellent lotion for sore eyes in horses and cattle consists of sulphate of zinc, one dram; tincture of opium, one dram, in one pint of rain water. It should be applied with a clean rag three times daily.

To Improve seed Potatoes.

The Plan is This:—Keep back some seed potatoes for six or seven weeks after the usual time of planting, say till the last week of June or the first week of July, and then plant and cultivate them the same as stock potatoes.—They will grow until the frost withers the vines, when they should be dug. As they have not had time to mature, they will be quite small—not more than an inch and a half through—but they should all be carefully gathered, and kept safe from frost through the winter, and planted at the usual time of planting in the spring, one of the small potatoes being sufficient for seed in each hill. The result will be, large sized, sound, mealy potatoes, as I have proved by actual trial. I hope it will be tried by some of our farmers this year.

Pasturage for dry Weather.

At the risk of complaints of repetition, we cannot let this paper go to press without saying, sow *corn for fodder!* and if not corn, then sow millet. Evidence accumulating an hundred-fold every summer testify to the great advantages of sowing, drilling or planting from half an acre to ten acres or more of corn, to be cut up during the latter part of summer, when the pastures are dried up. Besides a regular plot put in smaller ones here and there around the farm, in this corner, among those potatoes, on the summer fallow, &c., and then during the warm days of August and September, cut up and fed daily to each pastured animal a few handfuls of the green succulent stalks. This will keep all—whether workers, milkers, or growers—in good heart, and will *pay* ten-fold the cost. Try it, all. Sow or plant a little now, some more next week, and a little the week after.—*Am. Agriculturist.*

Sending Boquets to a Distance.—The best mode of sending small boquets to a distance is in a tin cannister, or a paper box, made cylindrical, and opening at both ends. A tube three inches long should be attached to one end; a hole must be punched in the side of the tube so as to admit a wire or pin. The stem of the boquet must be firmly fixed in the tube; some damp moss should then be placed around the stem, and inserted in the canister. When covered tightly with paper, the boquet will keep for a number of days. When the boquet is very large it can be fixed in a box in the same manner, by having the top and bottom movable.

Agricultural Education in the West.

The Ohio Agricultural College is permanently established at Cleaveland, and its course of instruction embraces whatever relates to animals, vegetables, land or labor. Chemistry, comparative anatomy and physiology, with special reference to the feeding and breeding of stock; geology and mineralogy; botany, descriptive and physiological; natural philosophy; agricultural mechanics; farm implements; meteorology; elements of engineering and land surveying; rural architecture; landscape gardening; draining; and farm book-keeping; political economy; history of agriculture, and general principles of laws, relating to contracts, and especially to the acquisition, profession and alienation of real estate.

A Commercial and Agricultural College has also been opened in the Hall of the Mechanics' Institution at Chicago.

How to use Nutmegs.—If a person begin to grate a nutmeg at the stalk end it will prove hollow throughout; whereas, the same nutmeg grated from the *other* end would have proved solid and sound to the last. This circumstance may be thus accounted for: The centre of a nutmeg consists of a number of fibres issuing from the stalk and its continuation through the centre of the fruit, the other ends of which fibres, though closely surrounded and pressed by the fruit, do not adhere to it. When the stalk is grated away, those fibres having lost their hold, gradually drop out and the nutmeg appears hollow; as more of the stock is grated away, others drop out in succession and the hollow continues through the whole nut. By beginning at the contrary end the fibres above mentioned are grated off at their core and with the surrounding fruit and do not drop out and cause a hole.

Ointment for Swollen Udder of Cows.—Take marshmallow four ounces, olive oil two ounces and camphor two drams. Mix them thoroughly and rub the affected part twice a day—after milking.

The Guano Question.

The following address has been made to the President of the United States by the Committee appointed under a resolution passed by the Convention recently in session at Washington:

Mr. President: On the part of a Convention of the farmers of our country, recently met in convention to consider the present state of the guano trade, we come to present to you, with our highest respect, our request that you will continue your negotiations with the Government of Peru (which, though hitherto unfortunate, may yet, in the vicissitude of human affairs, be brought to a happier conclusion) for the introduction of guano into our country on the most favorable terms possible to be procured.

In conclusion, sir, be pleased to accept our hearty acknowledgment of your efforts heretofore made for this purpose.

H. K. Burgwyn, of North Carolina; James T. Earle, of Maryland; Allen Bowie Davis, of Maryland; Thos. F. Nelson, of Virginia; John Jones, of Delaware, Committee on behalf of the Convention.

The last resolution adopted by the Convention was one offered by Col. Piper, of Carroll county, Maryland, which recommended farmers to adopt a certain mixture of other guano with the Peruivan article, so as to lessen its price, and, as was asserted by Mr. A. B. Davit, to increase its effect.

The Intelligencer publishes the following communication from Colonel Piper, giving a fuller explanation of his view:

To the Editor of the National Intelligencer:

Gentlemen.—Allow me early to put right the resolution submitted by me to the Convention, and by them adopted. The resolution embraced all phosphates, intending to render it as effective for the purposes avowed as it could be made compatible with the interest of the farmer. To have confined the recommendation alone to Colombian guano, however valuable, would certainly be to exclude all other mixtures and other means which we are bound to use to protect ourselves and accomplish our purposes. Therefore, I could not have intended to pass over the Mexican and Peruvian mixtures first recommended by our State chemist, Dr. Higgins, and used with signal success by myself and many others, and thus deprive us of one of our most efficient arms of defence, to protect us from, as we think, the injustice of the Peruvian Government or its agents, and to deprive us of one of our most efficient means to effect the objects of our resolution.

Suppose it practicable to reduce the consumption of the Peruvian guano by the general use of these mixtures, one-half or two-thirds, will it not greatly facilitate and aid our Government in their negotiation with the Peruvian Government, which we have just invoked?

I have the honor to be, with great respect, your obedient servant,

JAMES PIPER, of Carroll county, Md.

Washington, June 14, 1856.

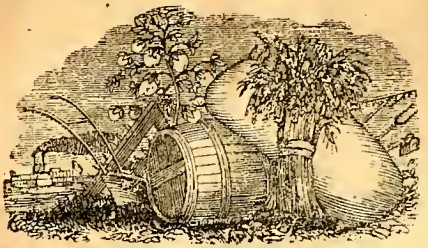
How to Mend China.—From an English almanac we cut a receipe for mending china, a long time since, and the opportunity having occurred for trying, we found it admirable, the fracture scarcely being visible after the article was repaired. It is thus made:—Take a very thick solution of gum arabic in water, and stir into it plaster of Paris until the mixture becomes a viscous paste. In three days the article cannot again be broken in the same place. The whiteness of the cement renders it doubly valuable.

Boiling Molasses.—When molasses is used in cooking; it is a very great improvement to boil and skim it before you use it. It takes out the raw taste, and makes it almost as good as sugar. Where molasses is used much for cooking, it is well to prepare one or two gallons in this way at a time.

Varnish to Prevent the rays of the Sun from Passing through the Glasses of Winnows.—Pulverize gum tragacanth and put it to dissolve for twenty-four hours in whites of eggs, well beaten. Lay a coat of this on the panes of your windows with a soft brush and let it dry.—*Mrs. Hale's Receipt Book.*

Making Vinegar.—A correspondent of the *Dollar Newspaper* says:—The cheapest mode of making vinegar is to mix five quarts of warm rain-water with two quarts of Orleans molasses, and four quarts of yeast. In a few weeks you will have the best vinegar you ever tasted.

Read Mr. James L. Gaines' address, which is published in full in this paper.



The Carolina Cultivator.

RALEIGH, JULY, 1856.

Turnip Culture.

It is now time to prepare ground for turnips. For as a general rule early sowing is found to be better then late. The chief difficulty in the way of early sowing is that time cannot well be spared from the other crops before the middle or latter part of July. The chances for a good crop from late sowing are much diminished. For if the first sowing should fail either from bad seed, or the destruction of the young plants by insects—there will not be an opportunity for a second trial, as there would be if the first sowing were sufficiently early. We would therefore advise all who wish to make sure of a good crop of turnips to have the ground well prepared and the seed sown as soon after the first of this month (July) as practicable, and by all means not delay sowing beyond the first of August, although in a favorable season a good crop may be obtained a week or two later than that.

The ground for turnips should be well pulverized and clean. If there is much litter upon it, it should be burned; for two advantages, will be secured by that means:—first, insects will be destroyed, and 2d, the land will get a light dressing of ashes which are always beneficial to turnips. A dressing of ashes should be added when they can be obtained. In England where the turnip crop is a much more important one than with us, the super-phosphate of lime is considered the best manure. But commonly a little Guano or fresh stable manure is used with it. The Guano or fresh manure gives the young plants an early start, so that they are not liable to be destroyed by insects.

An acre of land will yield in a good season from fifteen to twenty tons of turnips, and sometimes even as much as twenty-five or thirty tons. But at ten or twelve tons per acre this is a very profitable crop. For keeping cows and sheep there is probably no crop that can compete with them. For some reason or other turnips have never received much attention from our farmers. The reason being no doubt that they require a degree of care and skill that most persons are either unable or unwilling to give. It is only within the last ten or fifteen years that British farmers have given much attention to this crop, and at no former period has agricultural improvement advanced so rapidly. It has been estimated that England is now able to raise double the quantity of meat which she could formerly, and that this is owing mainly to the introduction of turnips as one of the principle crops. It may be that our climate will never admit of successful cultivation of large crops of turnips. But we think it would be well at least to try what may be done with them. Those who have tried them generally speak highly of their value. In 1845 in some of the richest of the middle and western counties the corn crop was nearly a total failure. But the failure was known in time to provide a partial substitute, and that substitute was the turnip. The early part of the season was so dry that the corn scarcely ever got above the clods.

But the rain set in about the first of July, and those who thought that there was no chance of fattening hogs with corn went to preparing for a crop of turnips. The result was that many who were afraid of bankruptcy or starvation found out by Christmas that they had as much pork and nearly as fair a prospect of wintering their stock as they had after a good corn crop. But turnips will be profitable only for those who keep stock. They are too bulky to carry off the farm. They will not answer well except in good land, or where manure is abundant. For light thin soil peas will generally be found to be preferable. They will grow on almost any kind of soil.

The following extract from an address by R. S. Fay Esq., will show in what estimation turnips are held by men in the Northern States.

"I propose to call your attention to the growth of roots, as an indispensable part of every good system of cultivation. This is very much neglected by us, although much of our soil is extremely well calculated to produce them. A neighbor of the

late Daniel Webster, who was certainly one of the best farmers New England has ever produced, once applied to him to know how he should proceed to improve his farm, which as he said, without doubt very truly, "was pretty much run out" that is to say, it had been cropped without system and without manure until nothing would grow upon it, while side by side were the luxuriant fields of Mr. Webster. His reply was "grow turnips." This laconic answer neither edified nor satisfied the querist. He wanted to know what wonderful virtue there could be in a turnip which was to work such remarkable changes on his farm, only knowing the vegitable to be a very good accompaniment to a leg of mutton or a tolerable addition to a broth. He asked therefore naturally enough, what turnips had to do with making his farm more productive. Mr Webster replied that he had not then time to go into the matter, as it would embrace the whole science of farming. He could only say this: To grow turnips the ground must be well plowed, highly manured, and kept free from weeds. It was a crop which in a proper rotation, prepared the land in the best manner for those which follow it; more than this it would do well on his light loams, although perhaps better adapted for a heavier soil.—Its yield was large and bulky; and to dispose of it to the best advantage it ought to be fed off the farm to the cattle during the winter. To do this he would be forced to increase his stock; and in this way he would augment his barn-yard manure, which in its turn would add to the fertility of his soil. He would have better cattle, better and more pigs; and if he kept a few sheep, as every farmer should do, his lambs would come earlier to the market, and would be in good condition and command high prices, instead of being sold for their felt."

"This recommendation to grow turnips must not exclude, nor was it intended to do so, the cultivation of other roots. Beets and carrots for some lands are more profitable than turnips, besides being better food for milch cows. Every farmer can soon learn by experience which root thrives best on his land; and having learned this he will be blind to his own interest if he does not cultivate it. In England and Scotland the turnip takes precedence of all other roots, and from being originally cultivated as the best fallow crop before wheat, rather than from its intrinsic value, it is now the most important one grown. A leading English agriculturist has said, I believe with perfect truth, that the failure of the turnip crop in that country would be a heavier blow to its prosperity than the failure of the bank of England. It is owing principally to the liberal use of the turnip that English cattle and sheep have reached their present high state of perfection, making the land support four times the number that could be maintained under the old system of hay and pasture feeding. If we should adopt their practice in this respect, there is no reason why we should go abroad to purchase, at enormous prices, animals which in all essential qualities are no better than, if as good as our native stock."

"There is a reason for extending the cultivation of the turnip which no farmer who has felt and witnessed the present summer's (1854) drought will think lightly of. Our climate is one of vicissitudes, more extreme in their character than any other under the sun. The old saying that it "never rains but it pours," is strictly true of New England. It is either a deluge or a drought; and the most weatherwise of us cannot truly foretell what the coming month shall bring in the way of heat or cold, sunshine or rain. We are tolerably certain however of one thing, that a "dry time may be expected" during the summer. It is therefore important that we should vary our crops as much as possible, so that the periods of the planting and maturing may run through the entire season. The fate of the hay crop is pretty well settled before the turnip is even planted, and a drought that may cut short our maize may pass away in season to give us a good field of turnips. We may thus have something to hope for in them long after we dispair of every thing else."

"The value of turnips as food for cattle and sheep, compared with other vegetable products, has been ascertained by a series of well conducted experiments in feeding, the correctness of which chemical analysis has fully confirmed. One pound of hay of the best quality is about equal to five pounds of turnips; and as twenty tons of the latter may be easily grown to the acre, it will be seen that we have the power to increase very materially the nutritive products of the soil by the cultivation of this root, leaving the land in better condition than after any other crop. For it must be borne in mind that the turnip, when it has been brought into leaf takes a great portion of its nutriment from the atmos-

phere, leaving a large part of the manure which has been necessarily applied to it to force its early growth for the crop which shall follow. The expense of cultivation need be no greater than for any other crop of half its value if proper drills and horse hoes are used, and there is nothing which repays the care and attention bestowed upon it so well."

Nine Important Questions Respecting the Irish Potato.

Messrs. Editors:—Permit me to submit nine important questions respecting the Irish Potato. Will you or some of your numerous corresponents be so good as to answer them.

1st. Should they be cut into large or small pieces, or not cut at all.

2. How wide should the rows be, and how wide planted in the drill, where the land is naturally rich or else manured heavily?

3. Most of the eyes are on one end. Now if the potatoes be cut in two pieces, cutting off to one end all the eyes except one or two, and these parcels be planted separately, under like circumstances, which will produce the most potatoes?

4. Should they be cut, four or five days, one, two or three weeks, before planting, or should they be planted immediately after cutting?

5. Best manner of housing them? Should they be put in a cellar, or pit, in a potato house or bill like sweet potatoes? Should there be any sand among them?

6. What manure is best for them? How will a composition of dirt out of a smoke house, dirt from under a house (containing saltpetre largely), ashes and rich loam, equal quantities of each, except the loam, which shall be equal in bulk to all the others put together, do as a top dressing?

7. Best method of keeping them from sprouting prematurely in the Spring?

8. Best time for planting them?

9. Is there any thing in the moon in planting potatoes, or any thing else? Some say for making any thing underground plant it in dark nights, and any thing above ground in light nights, and some one thing, and some another. Some are so superstitutious in things that if they can't get to plant on their time of the moon they will wait for another moon rather than plant then. Not that I believe in it myself, for I believe in planting in the ground, rather than the moon. But then I would like to hear it spoken of by some person in order to do away with the superstitious notions among the people. Any person answering the above enquiries (satisfactorily.)

Will Oblige,
ALIQUIS.

ANSWERS.

We will endeavor to answer a few of the questions of *Aliquis*. But as our experience in growing potatoes is quite limited, we must ask of our correspondents the favor of their contributions in order to give a *satisfactory* answer to these questions.

1st. "Should they be cut into large or small pieces, or not cut at all?" For medium sized potatoes say as large as a hen's egg, we would say plant them whole—very large ones may be cut into two or three pieces. But the practice of good farmers is by no means uniform on this point.

2d. The width of the row must be adapted to the soil. In a good dry light loam, where it is not necessary to have ridges, from twenty five to thirty inches will be sufficient—something will however depend upon the kind of potatoes grown, as some varieties have much larger stalks than others, and so require more space. In land that is inclined to be wet, three feet will not be too wide, so that large ridges may be thrown up with the plow.

To the fifth question we would answer that the chief thing to be attended to in housing potatoes, is to have a favorable time to do the work. The Irish potatoe will keep in almost any place provided it is not too warm and moist. Such as are intended for fall and winter use, as soon as the surface moisture has dried off, (and in drying they should not be much exposed to the sun,) may very conveniently be placed in boxes or barrels and covered with dry sand, or straw, and kept either in a cellar or store-room. Dry weather should always be selected for digging, and when the potatoes are perfectly ripe if intended for eating. Many maintains that seed potatoes should not be quite ripe. The following mode of storing, which we take from an English paper, we have seen tried and believe it to be a good one: "Choose a dry situation for the heap; lay them long and narrow, not allowing the bottom of the heap to be more than four feet wide; lay the tubers in ridge-ways as neat a possible; then cover them with fine mould, but do not on any account put straw next the tubers, nor beat the mould hard, but let it lie as light and hollow as possible. By these means the rank steam is allowed to pass off, and the air to purify the atmosphere within the heap: A trench should be dug round the outside of the heap at

least six inches deeper than the bottom of the heap, which will drain in case of wet; nothing is more injurious than the water lying about the bottom of the heap. A sort of thatch should be put on the outside of the mould about the beginning of December to keep out the frost, but should be removed quite as soon as the beginning of March. Late potatoes may be kept fresh as when dug till the beginning of May by this practice, when they may be taken away and put into any dark and cool place till used."

A dry cool cellar floor is the best place to keep seed potatoes from prematurely sprouting They should be spread out over the floor and turned every few days. In this way they may be kept till harvest.

In answer to the ninth question we will give a *speculation* as we have nothing better. There are a great many so-called superstitions, about planting and almost every other operation of common life. It is hardly resonable to suppose that all this has no meaning, and yet it is difficult to show that there is any great influence exerted by the moon. The truth of the matter we suppose to be this. *That which may be done at any time will often not be done at all.* It is on this principle that a belief in the influence of particular times for partienlar operations has been of great use to men. If the farmer thinks his potatoes should be planted during the dark nights he will not let that time pass without endeavoring to have them planted, knowing as he does that it will be a month before the time comes round again. But if he thinks any time will do he will be in danger of letting the whole season pass before he finds out that *any time* is pretty nearly equivalent to *never*, or at least that like to-morrow it never comes. By consulting those who are wise in such matters, we will find that there is a special time for almost every thing to be done. That the moon really has much to do with the growth of any plant we think exceedingly doubtful. But as potatoes ought to be planted at some time, let those who are not goverend by a better rule be sure to plant them during the dark nights, or may be their pot will have to boil without potatoes in it.

Exchanges.

GRAHAM, for July is out in a profusion of beauties, appropriate to the season.

ARTHUR'S HOME MAGAZINE is also on hand with its usual attractions.

New Books.

THE EARNEST MAN.—A sketch of the character and labors of ADONIRAM JUDSON, first missionary to Burmah. By MRS. H. C. CONANT. *Boston:* Phillips, Sampson, and Company. *New-York:* Sheldon, Blakeman, & Co., 1856.

The name of Dr. Judson is a household word with American Christians. The present memoir is compiled from all that has been written concerning him, and prepared with taste, eloquence, and skill by one of his early acquaintances. It is a neat volume of 498 pages, handsomely executed, and accompanied with a portrait.

THE NEW AGE OF GOLD: Or, the life and adventures of ROBERT DEXTER ROMAINE, written by himself. *Boston:* Phillips, Sampson, & Co.

For this and the preceding work we are indebted to the publishers. It is a fictitious narrative and full of remarkable adventures, told in an agreeable style, and quite pleasant reading for a large class of persons.

Communications.

For the Carolina Cultivator.

Sweet Potato Culture.

MESSRS. EDITORS:—In the last number of the Cultivator there appeared an article, over the signature of Chatham Farmer, relative to the mode of raising sweet potatoes. I have concluded to write out my experience as regards that valuable Esculent—the sweet potato—thinking that I can thereby be of some benefit to the readers of the Cultivator, as Chatham Farmer and others have been to me.

In the first place I go for a hot bed in which to bed the potato. I now have one, which I will describe a little, thinking my experience may probably be of some benefit to the balance. I did not get my potatoes until the 28th April in consequence of the scarcity of the article. I then got two bushels from Fayetteville paying two dollars per bushel. They were a mixture of the Perbates and African. The time being late I concluded to make the most of it by making a hot bed, having learned that such would forward the thing full three weeks, I first made me a box as large as I wanted my bed, which

I did by setting down plank edgewise and then driving up stobs to hold them securely and to keep the dirt from running out; not having any plank in the bottom for a floor, mind you, but built it on the ground. We then toated stable manure in a kind of hand barrow and filled up this box about ten inches deep, walking in upon it with every turn, which packed it down; I think it is best to pack down the manure pretty well, for, if I am not mistaken, it causes it to heat quicker and forward vegetation more, which is the main object. The directions from which I built my bed. Said to have your stable manure twelve inches deep; but the season being much advanced, and the weather warmer than when potatoes are commonly bedded, I concluded ten inches would answer and so I found it. Well after having in about ten inches stable manure, I placed on two in rich dirt. We then laid on the potatoes as usual and finished by putting on two inches more the same kind of dirt. When the bed was finished the top of it was about fourteen inches higher than the surrounding ground. The morning after we finished, I had to leave home on business and was gone three days—longer than I expected. I did not think the bed would heat too much before I returned and so I did not give any directions respecting watering them, by which the bed is to be cooled when it gets too hot: But in this I was mistaken, or rather happened so by my staying away longer than I expected. When I returned, I found the bed too hot. Though I should not have thought before that even three days would have hurt. Water was now supplied in quantities sufficient to cool the bed. I let the bed go on thus to the fifth day. I then found they were still too hot. I then tore up the potatoes and let all the dirt fall back on the manure. There was then four inches of dirt on the manure. I then put the potatoes on this dirt covered them with other dirt, making the bed about two inches higher than it was before. I should have observed though, that the potatoes were very warm when I examined them. You might hold them between you and the sun and you could see steam rising from them in considerable quantities, particularly on the side which was down in the bed. Some few of the potatoes were beginning to rot from getting overheated and others to sprout the fifth day mind you from the day they were bedded, which I consider quick. Where there was any rotten it was cut off. The potatoes, when I put them down were inverted *i. e.* the side that was down in the bed before we now turned up. They went on thus for five days more when we had an abundant fall of rain which cooled the bed completely and seemingly so it would heat no more. In a few days though it commenced getting warm again but not to hurt. About this time I came to the conclusion that the dirt in which they were bedded did not suit them. They were inclined to sweat and a kind of mould was coming on them. To remedy this I had some sand brought up from the river. I tore up the bed again and trimed off of the potatoes what was rotten. Roots and sprouts were now coming out pretty freely, but still they seemed to have a disposition to rot. The dirt was now taken off until we came in about two inches of the stable manure. Sand was now put on about an inch or more deep. The sand and dirt were then mixed together and the potatoes laid down again and their last time. They were covered again with a mixture of sand and the same kind of dirt, about half and half of each or probably more sand the usual depth. After beding them in this last mixture I noticed that they did not sweat and incline to mould as when beded in the dirt. The sand would not contain such a superabance of moisture so as to steam them like the dirt, but at the same time retained enough to hurry vegetation. I think it would have been greatly to my advantage to have beded them in sand and rich dirt at the beginning, as it would, I think have produced more sprouts as well (as saved a good deal labor; though I now have the nicest bed any where in the neighbourhood, I think they are coming up thick and strong all over the bed, some of which are large enough to set out in a little less than a month from the time of beding. Potatoes in the neighborhood generally rotted by being beded too early. Henceforth I shall be for a hot bed for sweet potatoes, but will know better how to manage one. A few remarks now as regards transplanting.

If the ground is dry where you set out, so as to have to use water, or something else, in order to save them I think mud out of a branch answers the best purpose. You can haul up your mud in your wagon without being at the trouble of driving hoops &c., to haul water. For frequently your barrels & hogsheads, from longstanding are found not to hold water with

out this preparation. Well haul up your mud. Then dig holes in the ridges the distance apart you want your slips, which should be, I think from eighteen to twenty four inches apart, and in ridges about four feet. People though differ as to distance. A good potato farmer formerly of this neighborhood, said he could raise more potatoes by weight, to plant in ridges four feet distance and two feet apart in the ridge, than he could to plant them closer. Again, it is I suppose generally known that to plant potatoes in very rich ground, such as have been made rich by barn yard manures, that they do not do well going too much to vine. I heard another large potato grower say that that can be remedied by planting them very thick—the very opposite at what I should have thought. In order to test the correctness of these plans some experimenting is necessary.

Every one to his own notion about distance until he finds out better. Well after your holes dug, have hands to go along with some of this mud, in baskets, or on boards, as they prefer, and drop a lump at each hole about as large as a hen egg. Then have your slips droped. Then let a hand come behind and after plastering the mud around the root of the slip sit it in the ground, and cover with the surrounding dirt. In this way they live, and do well in the driest weather without water, scarcely ever wiltering. As regards puting manure on top of the ridge for the potatoe I think our Chatham Farmer is right. I think manure for anything should be near the surface. So with a desire of seeing the science of Agriculture improved and Beautified, I

Remain Truly Yours.

A MOORE FARMER.

For the Carolina Cultivator.

Common Error in Plowing.

Messrs. Editors:—Plowing is a mechanical art which has been undergoing various changes and improvements from very ancient days down to the present time, and various have been the kinds and fashions of implements for the storing and tilling of the soil. But what I shall now choose to speak upon, is the manner of plowing, rather than the quality of the implements used; so it is a good turn plow it will answer my purpose. Very many people, in fact most, when they begin to break up a field do so by first amusing a furrow at, or near the out edge of the field, throwing the dirt out of the field, or at least where the roots of crops connot reach it, and in time makes a considerable embankment. Now this is all wrong. Well if wrong how do you remedy it. It is my intention if I know to tell you. First run a furrow from eight to twelve feet of the outer edge of the field. Then plow on each side of this furrow, running the bar of the plow every time (when on that side) next the outer edge and throw the dirt inwardly. Do this until you finish that land which will be on the out edge when you can plow no longer. Now you that have been following the old plan improve a little, tear down those embankments and instead of throwing the dirt outwardly, throw it inwardly.

Respectfully,

ALIQUIS.

For the Carolina Cultivator.

Descriptive Catalogue

Of Peaches that have been tested by actual bearing, previous to and during the year 1855, *by* Joshua Lindley, *New Garden, Guilford County, N. C.*

[Continued from page 120.]

84. *Vandervere, C.*—A thrifty growing tree, with globose glands and small flowers. The fruit is large, round, of a white color, with a little touch of red next the sun—flesh rich, juicy, sweet and excellent. The tree bears well and the fruit ripens the 20th of August.

85. *Fox's Heath, F.*—This tree grows thrifty, has globose glands and small flowers. The fruit is large, of a pale yellowish white, with a small touch of red next the sun, the flesh is rich, juicy and excellent, the tree bears well, and the fruit ripens the 20th of August. This peach much resembles the Heath cling and is undoubtedly a seedling of that fine peach.

86. *Persieque, C.*—This tree grows very thrifty, has uniform glands and small flowers. The fruit is very large, nearly round of a pale yellowish white color, with a small touch of red on the sun side. The flesh is rich, juicy, fine flavored and excellent, the tree is a good bearer, ripening its fruit about 20th of August.

87. *Howard's pound, C.*—This tree is a thrifty grower, with serrated leaves and small flowers. The fruit is very large, not quite round, but rather long, of a pale greenish white color, with a light touch of red next the sun,

flesh, rich, juicy and excellent, the tree promises to bear well, and the fruit ripens toward the end of August.

88. *Chepultepec*, *C.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large, a little lengthened, yellow, with a deep red cheek, flesh rich, juicy and excellent, the tree bears well and the fruit ripens about the 20th of August.

89. *Rodman's red*, *C.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large white with, a red cheek next the sun. It is a fruit that stands well, but I have not had sufficient opportunity to test it, ripe 20th August.

90. *Pinckney's*, *C.*—This tree grows thrifty, has serrated leaves and large flowers, fruit large, a little oblong, color nearly all over red, on a white ground, flesh rich, juicy and fine, the tree is a great bearer, and the fruit ripens the 20th of August.

91. *Tippecanoe*, *C.*—This tree grows very thrifty, with uniform glands and small flowers. The fruit is very large, nearly round of a yellow color, with a red cheek. The flesh is rich, very juicy, sweet, fine flavored and excellent, the tree bears well, and the fruit ripens the 20th of August.

92. *Buena Vista.*—This tree grows thrifty, has globose glands and small flowers. The fruit is very large, a little oblong, of a greenish white color, scarcely touched with red, flesh rich, juicy and pleasant, resembling the President from which it was raised. The tree bears well and ripens 20th of August.

93. *Swann's Meloeolon.*—This tree grows very thrifty, has uniform glands and small flowers. The fruit is very large, nearly round of a yellow color, mixed with red, making a grayish red appearance, the flesh is yellow, mixed with red, very rich, juicy, fine flavored and excellent, the tree bears well and the fruit ripens the 20th of August.

94. *Stafford's Yellow*, *C.*—This tree grows thrifty, has globose glands and small flowers. The fruit is large, nearly round, yellow, flesh rich, juicy, and excellent and the fruit ripens toward the end of August and bears well.

95. *Stafford's large white*, *F.*—This tree grows thrifty, has uniform glands and large flowers. Fruit large, nearly round, white rich, juicy, and fine, the tree bears well and the fruit ripens at the end of August.

96, *Elliott's Supurb*, *C.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large, rather oblong of a dull reddish brown color, flesh yellowish red, rich, juicy and fine and the fruit ripens late in Aug. and bears well.

97. *Neulin's sweet*, *C.*—This tree grows thrifty, has uniform glands and large flowers. The fruit is rather under medium size, pale yellowish white, rich, very juicy, and sweet, the tree is a great bearer, and the fruit ripens about the middle of August.

98. *Orange*, *C.*—This tree grows thrifty, has uniform glands and large flowers. The fruit is of medium size, of a clear yellow color, and round form, flesh rich, jnicy, sweet, fine flavored and excellent, and the tree is a great and sure bearer, ripening its fruit about the 20th of August.

99. *Sloan's Carolina.*—This tree grows thrifty, and has globose glands. The fruit is large, nearly round, color yellow with a red cheek, flesh rich, juicy and fine, and the fruit ripens about the 20th of August.

100. *Indian-peach.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is rather large and rather long, of a dark yellowish rusty red color, flesh red, somewhat mixed with yellow rather rich, somewhat juicy and good, the tree is a great bearer and the fruit ripens toward the end of August.

101. *Carolina Blood*, *C.*—This tree grows rather thrifty, has serrated leaves and large flowers. The fruit is rather large, nearly round, of a dull dusky red color, the onter circle of the flesh red, the inner circle white, a little mixed with red, the flesh rich, juicy and fine. The tree is a great bearer, and the fruit ripens the latter part of August.

102. *Flushing Heath*, *C.*—This tree grows thrifty, has uniform glands and small flowers. It grows much more like the Monstrous, C. than the Heath, C. The fruit is large, round, white, with a considerable flush of red on the sun side, flesh rich, juicy and good, and the fruit ripens toward the end of August.

103. *Ward's late.*—This tree grows thrifty, has globose glands and small flowers, the fruit is large, rather oblong, of a pale yellowish white color with a marbled red cheek, the flesh is rich, juicy, fine flavored and excellent. The tree bears well, and the fruit ripens toward the end of August.

104. *Druid Hill.*—This tree grows thrifty,

has globose glands and small flowers, the fruit is very large, nearly round of a pale greenish white color, flesh rich, juicy, and excellent the tree bears well, and the fruit ripens towards the end of August.

105. *Lagrange.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is a very large, rather oblong in form, of a pale green color, the flesh rich, juicy, and excellent, the tree bears well, and the fruit ripens at the end of August and begin of September.

106. *Smock, F.*—This tree grows thrifty, has uniform glands and small flowers, the fruit is rather large, rather long, yellow with a red cheek, flesh rather acid, somewhat rich, juicy and pleasant. The tree is a great bearer, and the fruit ripens at the end of August.

107. *Swain's Yellow.*—This tree grows thrifty, has uniform glands and large flowers. The fruit is rather oval, yellow, flesh rich, some juicy, and good, a great bearer, ripe end of Aug.

108. *Heath, F.*—A thrifty growing tree, with uniform glands and small flowers. The fruit is large resembling the Heath cling, but is a freestone raised from seed of the Heath cling, ripe end of August.

109. *Flushing Imperial, C.*—This is a thrifty growing tree, with uniform glands and small flowers. The fruit is very large, rather oblong, of a white color, with a large marbled red cheek, flesh rich, juicy, fine flavored and excellent. The tree is a great bearer, and the fruit ripens towards the end of August.

110. *Whitehead's Red Heath, C.*—This tree grows thrifty, has uniform glands and small flowers. The fruit is large, rather longish of a pale yellowish white color, with a rich blush of red on the sun side, the flesh is rich, juicy and excellent, the tree bears well and the fruit ripens at the end of August.

111. *Catharine, C.*—This tree and its fruit resembles the Heath, C. very much but it ripens earlier. The tree grows thrifty, has uniform glands and small flowers. The fruit is large, rather long, of a pale yellowish white color, with a small touch of red next the sun, flesh rich, juicy, fine flavored and excellent, the tree is a good bearer, and the fruit ripens at the end of August.

112. *Monstrous, C.*—This is a tree of a thrifty spreading growth with uniform glands and small flowers. The fruit is very large, nearly round, of a greenish white color, with a dull red cheek. The flesh is rather rich, rather acid, somewhat sweet, but not fine. The tree is a thin bearer, and the fruit ripens at the end of August. The tree Monstrous pompone, with large flowers, was very superior to this, but it appears to be lost, as I always have received this for it of late years.

113. *Heath, C.*—This magnificent peach ripens here the first half of September, and is one of the finest of all peach. The tree grows thrifty, has uniform glands and small flowers the fruit is very large, rather oblong, of a rich cream colored white, with some touches of bright red next the sun. The flesh is very rich, very juicy, fine flavored and excellent, the tree is a good bearer, and the fruit ripens from the 1st to the 15th of September.

114. *September White.*—This tree grows thrifty, has uniform glands and large flowers, and the tree bears well, the fruit is white of medium size, nearly round, somewhat sweet, juicy, and pleasant, and ripens early in September.

115. *September Red.*—This tree grows thrifty, has uniform glands and large flowers, and the tree bears well. The fruit is of medium size, round of a pale green color, with a red cheek, rather sweet and pleasant, ripe early in September.

116. *September Yellow.*—A thrifty growing tree, with uniform glands and large flowers. The fruit is large, oval shaped, color yellow, flesh rich, some what juicy and excellent, the tree bears well, and ripens its fruit the first half of September.

117. *Late Yellow Albinge, C.*—This tree grows thrifty, has uniform glands and large flowers. The fruit is of medium size, rather oval, color yellow, flesh rather rich, juicy, and fine, and the tree bears well, ripening its fruit the first half of September.

118. *Late Yellow, C.*—This tree grows thrifty, has uniform glands and large flowers, and the tree bears abundantly. The fruit is of good medium size, yellow, with a red cheek, the flesh is rather rich, somewhat juicy and good, and the fruit ripens early in September.

119. *Mitchell's Mammoth, C.*—This tree grows very thrifty, has uniform glands small flowers, and the tree bears well. The fruit is very large, round, of a rich cream colored white, with some touches of a red on on the sun side, the flesh is rich, very juicy, and ex-

cellent, and it ripens the last half of September, succeeding the Heath, C. of which it is a descendant, and the greatest acquisition yet made to our collection of late peaches.

120. *Late White, C.*—This tree grows thrifty, has serrated leaves and large flowers, and the tree bears well. The fruit is rather large, nearly round, white, with sometimes a light touch of red next the sun, flesh rich, juicy and fine, and it ripens early in October.

121. *September White, C.*—This tree grows thrifty, with uniform glands and large flowers, the fruit is of good size, white, and of good quality, ripe in September.

122. *Alamance, C.*—This tree grows thrifty, has uniform glands and large flowers, and the tree bears abundantly. The fruit is of medium size, nearly round, yellow, with a red cheek, flesh rich, juicy and fine, and the fruit ripens early in October.

23. *Elliot's Late.*—This tree grows thrifty, has uniform glands and large flowers, and the tree bears well. The fruit is rather large, nearly round, of a greenish yellow color, a pleasant good fruit, ripening in October.

124. *Scott's Late White, C.*—This tree grows thrifty, has uniform glands and large flowers, and bears well. The fruit is rather large, round, white, and is considered a pleasant good fruit, ripening early in October.

125. *Cumberland, C.*—This tree grows thrifty, has uniform glands and large flowers. The fruit is rather large, round, of a greenish white color, pleasant, juicy and good, and ripens in October and is a great bearer.

126. *Taylor's Frost.*—This tree grows thrifty, has uniform glands and large flowers. The fruit is of medium size, of a greenish yellow color, and when the autumn is warm and dry, the fruit is of a good quality, ripe early in November.

127. *Eaton's Golden, C.*—This splendid new peach was exhibited at the late Agricultural Fair held at Raleigh on the 18th of October last, by Wm. Eaton, of Granville county. It is of large size, of a deep golden yellow color, nearly round form, flesh rich, juicy, fine flavored and excellent. Indeed it is by far the greatest acquisition yet made to our October peaches. Those peaches were its first crop, excepting, one peach on a previous year. Arrangements are made for cuttings of it this winter, and trees plenty may be expected to be had at our nurseries in the Fall of 1857, and only a few sooner.

Miscellaneous.

How to Fence out the Striped Bug.

The season for the "striped bug" to commence its ravages is now close at hand, and unless you are prepared to defend your cucumber vines and squashes, melons, and the like, they will be destroyed by this enemy to all such productions.—We last year gave the mode by which we had succeeded in fencing him out. Further experience has proved the plan to be a very good one indeed.

We had about a hundred hills of marrowfat squashes protected from their ravages, and so completely did the boxes recommended work, that they were perfectly secure from their depredations, and not a bug touched them until they had grown so as to project their leaves above the upper edges of the boxes, when they pounced upon them with great eagerness, and riddled some of them. By this time the plants had become so vigorous and strong, that although some of their leaves were completely dissected, they went along and produced well in the fall. The following is the description given last year:—

The little striped bug which destroys our cucumbers and melons and squashes almost as soon as they are up, has taxed the ingenuity of the gardener to ward off their attacks. For a long time, wooden boxes, covered with muslin, were used and found to be very effectual, although they shut out a part of the light, and of course drew up the plants to the top rather too fast, making the stalk rather weak. It was afterwards discovered that it was not necessary to have the box covered with muslin to keep them out. That if the box were tight at the corners, and settled down into the ground, so they could not creep under, the bug would not molest the vines that were enclosed. That the bug in flying could not dodge or turn short corners, but must take a straight course from vine to vine, also that he very seldom if ever creeps up the sides of the box, but is more given to burrowing under, and if he cannot do this gives it up for a bad job.

Now, board boxes, with or without muslin tops are bulky and take up much room when stored away, besides being somewhat expensive in the cost of stuff, and in making. We have

recently laid them aside, and have adopted the following method of fencing them out.

We went to the oil cloth carpet factory and obtained strips of their carpeting, having the first coat of paint, or body, put on. These strips are four feet long, and from four to six or eight inches wide. To a light stick or lath, say a foot long, tack the two ends of the strip, leaving four or five inches of the stick projecting below the cloth. This end may be sharpened.

Then take three more sticks or laths, and run a saw cut up part way.

Place the cloth around the hill, and placing the sticks about a foot apart, running the cloth into the saw cuts, you pin it down to the earth and make a yard about the plants just a foot square. Or you may use common sticks put inside, which will press the sides out and retain them in place.

This fence effectually defends the plant from the ravages of the striped bug, is comparatively cheap, durable, and when not in use the whole fixtures may be packed away in a box until next season.

But everybody cannot have access to an oil cloth carpet factory, and obtain strips of painted cloth for this purpose. To obviate this difficulty, we can tell them of another mode which may answer: Procure some of the cheapest kind of cotton cloth, a yard wide. Tear it into strips six inches wide and four feet long. Have the edges of these hemmed, soaked in alum water, and use them as we use the above. only tack all the sticks on instead of having the saw cuts as in the painted cloth.

[From the Southren Cultivator.

Fodder Pulling—Its Injury to the Corn Crop.

Messrs. Editors.—For a considerable time past, I have been a careful reader of your valuable paper, though I have not heretofore attempted to trouble you with any thoughts of my own.

In the last volume of the Cultivator, was a letter from J. H. Batte of Virginia, on the injury resulting from pulling fodder from corn, with which I was much pleased, hoping that a few such experiments being made public, would check this deleterious practice. The subject was again brought to my mind by the request of E. Jinkins of Mississippi, (in February number) "that some one would test the injury resulting to the corn crop by pulling fodder, for a series of years."

I do not think it is necessary to make a series of experiments on the subject, as the injury resulting must be nearly, or quite uniform in each case, if the fodder is pulled at the same stage of maturity, and the relative injury sustained by the crops, from pulling fodder at different stages of maturity, can be fully tested during the same season.

Mr. Batte's experiment was made at the usual time of pulling fodder; and the loss was one sixth. A few years ago, I made a similar experiment at about a week after the common time of pulling, in which the loss sustained to the crop, was one-nineth by weight. At whatever stage of maturity the blades are stripped from the stalk—just at that stage is the maturity of the crop arrested—it gains nothing from the hour in which it is done. The leaves of plants are not mere appendages or ornaments, but vital parts of the plant, and subserve a similar purpose in the vegetable economy that the lungs do in the animal system. As the lungs are the medium through which the blood comes in contact with the air, and is purified and rendered fit for circulation and nutrition, so the leaves of plants are the medium through which the sap is rendered fit for circulation and nutrition to the plants; and upon their removal nutrition ceases and death speedily results.

In the experiment to which I have alluded, I wished to satisfy myself as to the probable amount of injury sustained by the crops, and whether there was any gain to the crop after the fodder was pulled. From the first row I pulled the fodder, the next I left untouched, and the third I cut down to the ground and shocked up, and so, alternately, through the piece. When the corn was all fully dry it was shucked out and carefully weighed. No appreciable difference could be discovered in the weight of Corn from the rows from which the fodder had been pulled and those where the stalks had been cut off at the ground—while those rows left untouched invariably weighed one ninth more than the rows on either side of them that had been so treated.

It, therefore, seems to me to be the better policy to cut off the entire crop of corn and thus have the stalks as well as the blades; though I very much disapprove of either plan. In fact, a man should not pull fodder for me, even if he

would work for nothing, board himself and give me the fodder stacked up in the bargain. I would still be a loser.

Many may be disposed to say that they must have the fodder at any rate, let it injure the corn crop ever so much. This is a mistake; we can do without pulling fodder as well at the South as they do at the North. Our crab grass ["crop grass"] if properly treated, will almost anywhere, make an excellent meadow. All that is necessary is to plow the ground late in the spring to destroy the early weeds. I treated a piece of ground in that way last year and produced as luxurient a swath of grass as I ever saw in a Northern meadow. I mowed it twice during the year and found it made excellent hay, though it is more difficult to cure than blue grass or timothy; but that is more than overbalanced by the greater ease and cheapness of its production. Try it—it is not yet too late in the season.

This letter is already longer than I wished, so I will merely add: that when the present energetic search after foreign grasses shall have been abandoned the grasses indigenous to the South will then be appreciated as the grasses best suited to their native soil and climate.

A. M. G.

Blount Co., Ala., April, 1856.

Synopsis of the Late Eastern War.

As a matter of interest to our readers and for future reference we insert the following Synopsis of the late Eastern war.

Monday, March 27th. 1854, war was formally declared by France and England against Russia.

April 3d, the first French troops under Gen. Canrobert arrived at Constantinople. April 10th, a specific treaty of alliance sig ed by England and France. April 22d, Odessa bombarded.—May 17th, siege of Silistria commenced. June 15th, the Turks made a desperate sortie, and repulsed the Russian investing army with great loss. June 23d, siege of Silistria raised. July 7th, Turks defeated Russians a Giurgevo. July 30th, Russians again defeated at the same place by the French and Turks with a loss of 2000 men. August 7th, battle (first) of Kars, Russians victorious though losing 5000 men. August 8th, siege of Bomarsund commenced; August 16th, surrender of same with 2000 prisoners.

September 2d, Allied expeditionary army assembled at Baltschik, consisting of 62,000 English, French, and Turks. Sept. 5th, Allied Army sailed from Varna and Baltschik for the Crimea. Sept. 14th, landed at Eupatoria.—Sept. 2 th, battle of the Alma, Russians defeated with loss of 6 00 men. Sept. 27th, first investment of Sebastopol. October 17th, first bombardment of Sebastopol, both by sea and land. Oct. 25th, battle of Balaclava. Oct. 26th, Russians made a sortie from Sebastopol but were repulsed with a loss of 1000 men.—Nov. 3d, (Sunday,) battle of Inkermann, Russians routed after a desperate struggle. Allies lost 4000 men. Russians 9000. Jan. 23d, 1855, dreadful sorties made from Sebastopol, all repulsed. Feb. 17th, Russians declared war against Sardinia. March 1st, the suspended fire on Sebastopol resumed. March 15th, Peace Conference of Vienna formally opened. March 17th, Russians rifle-pits all taken by the French.—March, 23d, Russians attacked the Allied investing army but were repulsed with a loss of 1100 men. April 8th, adjournment of the Vienna Conference through disagreement. April 9th, 530 of the heaviest guns opened fire on Sebastopol. June 7th. the Allies having captured all the outer works, attacked and carried the Mamelon and White Towers. June 18th Allies attacked the Malakoff and Redan but were driven back with a heavy loss. June 28th, Lord Raglan died. Aug. 11th, bombardment of Sweaborg. Aug. 16th, battle of Traktir-Bridge.—Sept. 5th, final bombardment of Sebastopol.—Sept. 8th, fall of Sebastopol—the loss immense on both sides. The Allies loss 10,000 men, the Russians 21,645. During the last three weeks of the siege the Russians lost 1000 a day. The siege lasted 349 days. Sept. 29th, battle of Kars, Russians defeated. Nov. 28th, Kars capitulates. Jan. 10th, 1856, Allied War Council assembled at Paris. Feb. 25th, Peace Conference opened at Paris. Feb. 29th, an armistice of one month agreed upon between the belligerents. March 30th, the Conference after twenty-one sessions, concluded its labors and the Treaty of Peace is signed by the Plenipotentiaries at 1 o'clock this day. March 31st, the Czar Alexander issued an imperial Manifesto announcing the conclusion of Peace, and thereby ratifying the same.

The cost of the war is estimated at six hun-

dred millions of dollars on the part of the Allies, and a still greater sum on the other side. This is the direct cost; the indirect costs and losses by the perversion of energies of the chief powers of Europe to the arts of destruction, by the interruption to business and industry are incalculable. The loss of life is reckoned at 300,000 on the side of the Allies, and 350,000 on the side of Russia.

REMEDY AGAINST CURCULIO.—A. H. Gross, in the Pittsburg Post, introduces to the public, what he calls a perfect remedy against Curculio, the destroyer of the plum. He says:

This remedy has been used with decided success, by gentlemen in possession of large plum orchards, and is also favorably noticed by some of the agricultural farmers, to which I would add my own experience of its being what is claimed for it—an effective remedy against the Curculio. Take salt of harishorn, (ammonia,) 1 ounce; common soft soap, 1 pint. Dilute and dissolve with three gallons of water. Apply this preparation with a syringe to the foliage and fruit of the tree, in the morning. Repeat twice or thrice a week. The Curculio makes the attacks by stinging the plum and depositing its eggs in the wound for about two weeks, during which time the remedy should be continued. They commence operations when the fruit is about one fourth grown. This may be a remedy, and we hope it will not be considered too troublesome to try. There is no use raising the plum if some means are not within reach to protect it against this very destructive insect. We shall certainly try the remedy ourself.—*Germantown Telegraph.*

Benevolence.

We do not think a person can evince a more benevolent trait of character than being moved at the distress and suffering of others, and furthermore, anxious to do all in their power to alleviate by every possible means human suffering. In this view of the case, we do not know how the humane and benevolent can do an action more in accordance with their philanthropic views, than by calling the attention of their afflicted friends and acquaintances to the fact, that Dr. SETH S. HANEE, of 108 Baltimore St., Baltimore, Md., has discovered a preparation, which is put up in the form of a pill, that has a specific action for curing Epilepsy, or falling fits, spasms, cramp, and all forms of nervous diseases. Among those who have been permanently cured, we might mention a member of the family of James H. Beadle, Huntsville, Alabama; Mr. M. P. Sledge, Cabin Point, Surry county, Va., and Mr. W. P. Ligon, Grenada, Mississippi. We might go on enumerating a number of others, until we had entirely filled up this column of our paper; but we think we have said sufficient to satisfy every person that the subject under consideration is one of vital importance to every one. Reader! if you are a man or woman, and have no need of a remedy, perhaps you know some person who is not equally blessed as yourself, if so, cut out this notice, and send it to him or her. It will cost you but little trouble, and probably it will make you instrumental in curing some poor, afflicted mortal of that dreadful visitation, Epilepsy, or falling sickness.

Dr. Hance sends his pills by mail, free of postage, to all parts of the world, on the receipt of a remittance. His prices are; one box, $3; two, $5; twelve, $24. We have given his address above.

Worms! Worms!

☞ There is no disease more common among children, and yet none which so frequently baffles the skill of the physician, as worms. They are highly detrimental to the constitution; and their presence should be carefully guarded against by parents. On the first manifestation of symptoms, every means should be used to expell them promptly and thoroughly.—M'Lane's Vermifuge is well established as the most certain, safe and speedy remedy ever offered for this troublesome and dangerous malady; and all who have the management of children should keep this invaluable medicine at hand. In addition to its perfect safety, it never fails to produce the desired effect.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa.** All other Vermifuges in comparison are worthless. Dr. M'Lane's genuine Vermifuge. also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Liver Complaint.

☞ This dangerous and often fatal disease had long baffled the skill of the most eminent physicians, when the discovery of Dr. M'Lane's Liver Pills solved the difficulty, and presented to the world *the Great Specific* for that complicated malady, which has attained such wide spread celebrity for its certainty of cure. This successful remedy was the result of many years' study, in which the symptoms were narrowly observed, and are thus described by the Doctor himself:—

"*Symptoms of a Diseased Liver.*—Pain in the right side, and sometimes in the left, under the edge of the ribs—the patient being rarely able to lie on the left; pain sometimes under the shoulder-blade, frequently extending to the top of the shoulder—often mistaken for rheumatism in the arm; sickness of stomach, and loss of appetite, bowels mostly costive, but sometimes alternate with lax; dull heavy sensation in the back part of the head; loss of memory, with uneasiness of having neglected something; sometimes dry cough; weariness and debility; nervous irritability; feet cold or burning, and prickly sensation of skin; low spirits, lassitude, with disinclination to exercise, although satisfied it would be beneficial. In fact, patient distrusts every remedy.'

Have you any, or all of these symptoms?—If so, you will find a certain remedy in Dr. M'Lane's Pills.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Liver Pills, manufactured by Fleming Bros. of Pittsburgh, Pa.** There are other Pills purporting to be the Liver Pills now before the public. Dr. M'Lane's genuine Liver Pills, also his celebrated Vermifuge, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Counsel.—But few of the reading public are aware how continually an editor is called upon to advise his patrons on every subject, from politics to his breed of cattle. Through the whole range of our duties none has perplexed us more than to tell our readers what to take for a cure when they are sick. Hitherto this has been a severe trial to all our skill, but it will not be hereafter. We have been taking, and have seen the evidence from others that have taken Doct. Ayer's Cherry Pectoral and Cathartic Pills. They need but a slight trial to convince the most sceptical how far they are superior to the other medicines we have had in use. They have one single property of great importance to the sick and that is *they cure.—Boston Herald.*

Table of Contents.

An Address by James L. Gaines, Esq.,..... 129
Attend to your peaches,..... 138
Agricultural education in the West,..... 142
Buckwheat—Its culture,..... 137
Black Teas,..... 139
Boiling Molasses,..... 143
Common error in plowing,..... 149
Exchanges,..... 147
Fodder pulling—its injury to the corn crop,.... 153
Gathering the perfume of plants,..... 139
Green Teas,..... 139
Gooseberry Mildew,..... 141
Harvest drink, diet and medicine,..... 136
Hints to farmers,..... 138
How to drive bugs away from young vines,..... 139
How to use nutmegs,..... 142
How to mend china,..... 143
How to fence out the striped bug,..... 152
Irish potatoes,..... 146
Mainge ointments,..... 138
Mulching with living plants,..... 140
Medical Notices,..... 155
New Books,..... 147
Ointment for swollen udder of Cows,..... 142
Peaches, descriptive Catalogue of..... 149
Pasturage for dry weather..... 142
Remedy against Curculio,..... 155
Substitute for cream in tea or coffee,..... 139
Sending Boquets to a distance,..... 142
Sweet Potato culture, ... 147
Synopsis of the late Eastern war,..... 154
Turnip culture,..... 144
The law of slopes,..... 138
The Eye,..... 141
To improve Seed Potatoes,..... 142
The Guano Question,..... 143
Varnish to prevent the rays of the sun from passing through the Glasses of Windows,..... 143
Vanilla,..... 141
Vinegar, making of..... 143
Watering Horses, ... 135

Wyche's Cultivating Plow.

PATENTED 26TH FEBRUARY, 1856. (THE Bladed Plow,) awarded $20 premium at the last N. C. State Fair; with cutting blades in the place of a moldboard; cuts, divides and turns over the soil; depositing the finer parts in the furrow, and turning over the turf, clods, &c., on the surface. Is cheap, light, and lasting, and easy to both driver and team. Admirably adapted to almost any purpose for which the plow is used.

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Brookville, Granville Co. N. C.
June 16, 1856. 5—tf.

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February, 1856. tf

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There is also a new fire proof Ware House on the lot, in which all articles on consignment are stored. The following are some of the articles brought to the late Fair: Horse Powers, Wheat Fans, Corn Drills, Field Rollers, Corn and Cob Crushers, Harrows, Cultivators, and Plows of every size and description.

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Straw Cutters of all the most approved kinds, varying in price from 5 to 50 dollars a piece; Corn Shellers, from 7 to 60 dollars a piece; among which may be found Readings celebrated Sheller, capable of shelling and fanning at same operation 2000 bushels corn per day. Also, the verticle cylinder, double and single iron and wooden spout shellers.

Grain Fans from 15 to 34 dollars a piece, among which may be found the best Fans in use. Wheat Thrashers and Horse Powers complete, capable of threshing 300 bushels wheat per day. Cultivator's, Harrows, Horse Rakes, Horse Hoes, Improved Scythes and Cradles. Plough Castings of every variety: farmers Boilers and Cauldrons; Sausage Meat Cutters and Stuffers; Pure Peruvian and Mexican Guano; Chappells Fertilizer; Ground Plaster; Bone Dust; Prepared Guano, Poudrette, &c. &c..

Hoe & Co.'s Warrented Circular and other Saws; Patent Leather Banding; Best Bolting Cloth; Mill Machinery; Mill Stones; Water Wheels; Premium Georgia Cotton Gins, and Gin Gearing, &c.,&c., &c., all of which will be furnished on the most liberal terms by WILLIAM H. OLIVER & CO.

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Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete assortment of the most approved Farming and Horticultural Implemeots, of good quality and at low prices.

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A new and singularly successful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousness, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but effectual Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the hearses all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characters to forbid the suspicion of untruth.

Among the many eminent gentlemen who have testified in favor of these Pills, we may mention:

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Hon. Edward Everett, Senator of the U S.

Robert C. Winthrop, Ex-Speaker of the House of Representatives.

Abbott Lawrence, Minister Plen. to England.

†John B. Fitzpatrick, Cath. Bishop of Boston.

Also, Dr. J. R. Chilton, Practical Chemist, of New York City, endorsed by

Hon. W. L. Marcy, Secretary of State

Wm. B. Astor, the richest man in America.

S. Leland & Co., Propr's of the Metropolitan Hotel, and others.

Did space permit, we could give many hundred certificates, from all parts where the Pills have been used, but evidence even more convincing than the experience of eminent public men is found in their effects upon trial.

These Pills, the result of long investigation and study, are offered to the public as the best and most complete which the present state of medical science can afford. They are compounded not of the drugs themselves, but of the medicinal Virtues only of Vegetable remedies, extracted by chemical process in a state of purity, and combined together in such a manner as to insure the best results. This system of composition for medicines has been found in the Cherry Pectoral and Pills both, to produce a more efficient remedy than had hitherto been obtained by any process. The reason is perfectly obvious. While by the old mode of composition, every medicine is burdened with more or less of acrimonious and injurious qualities, by this each individual virtue only that is desired for the curative effect is present. All the inert and obnoxious qualities of each substance employed are left behind, the curative virtues only being retained. Hence it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

As it is frequently expedient that my medicine should be taken under the counsel of an attending Physician, and as he could not properly judge of a remedy without knowing its composition, I have supplied the accurate Formulæ by which both my Pectoral and Pills are made to the whole body of Practitioners in the United States and British American Provinces. If, however, there should be any one who has not received them, they will be promptly forwarded by mail to his address.

Of all the Patent Medicines that are offered, how few would be taken if their composition was known! Their life consists in their mystery. I have no mysteries.

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They operate by their powerful influence on the internal viscera to purify the blood and stimulate it into healthy action—remove the obstructions of the stomach, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wherever they exist, such derangements as are the first origin of disease.

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PREPARED BY JAMES C. AYER.

Practical and Analytical Chemist.

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Price 25 Cents per Box. Five Boxes for $1.

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Raleigh, Feb. 14, 1856.

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As a Female Medicine they act like a charm, and when taken according to the directions, they never fail to cure the worst cases of **Piles,** after all other remedies fail.

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These Pills act as an Expectorant, Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups, Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

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Price 25 cents per box, containing 25 doses of Medicine.

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Both kinds of the above-named Pills are for sale in **Every Town and Village in North and South Carolina.**

And at Williams & Haywood, Raleigh, N. C.
May 1855. 3—

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The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President.*
S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney.*
PETER ADAMS, *Sect. & Treasurer.*
W. H. CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf.

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assured for life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $30, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

SLAVES are insured for a term of from one to five years, for two-thirds their value.

All losses are paid within 90 days after satisfactory proof is presented.

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WM. D. HAYWOOD,	WM. D. COOKE,
JOHN G. WILLIAMS,	R. H. BATTLE,
H. W. HUSTED,	WM. H. JONES,
WM. H. MCKEE,	P. F. PESCUD'
CHARLES B. ROOT,	SEATON GALES.

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WILLIAM D. HAYWOOD, *Vice President,*
JAMES F. JORDAN, *Secretary,*
WILLIAM H. JONES, *Treasurer,*
H. W. HUSTED, *Attorney.*

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RICH'D. B. HAYWOOD, M. D. } *Consultation.*

R. H. BATTLE, } *Executive Com-*
W. W. HOLDEN. } *mittee.*
CHARLES B. ROOT, }

Communications should be addressed, (post paid) to
JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA
MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

OFFICERS OF THE COMPANY.

President.
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*

John R. Williams, }
T. H. Selby, } *Executive Committee.*
C. W. D. Hutchins, }

This Company has been in successful operation for more than 7 years, and continues to take risks upon all classes of property in the State, (except Steam Mills and Turpentine Distilleries,) upon favorable terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Country risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured

The average cost of Insurance upon the plan of this Company has been less than one third of one per cent. per annum, on all grades of property embraced in its operations.

All communications in reference to insurance should be addressed to the Secretary, post paid.

J. C. PARTRIDGE, *Sec'y.*

Raleigh, June 9th, 1856.

JOHN N. GORDON,
Grocer and Commission Merchant and Dealer in Metals,

14th Street, near the Exchange Hotel,
RICHMOND, VA.

May, 1856. 3.—tf.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. COOKE, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

EXECUTIVE OFFICE,
Raleigh, Jan. 26, 1856.

MR. WILLIAM D. COOKE has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

DEAR SIR:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
January 26th, 1856. WILL: A. GRAHAM.
WM. D. COOKE, ESQ.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

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Ep630.5 T. D. M'Dowell

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Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher. B. S. HEDRICK, Agricultural Editor.

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Miscellaneous.

On Feeding Animals.

EFFECT O · LONG-CONTINUED DAIRY HUSBANDRY UPON THE QUALITY AND PRODUCE OF THE SOIL.

And whence does the mother derive all this gluten and bone-earth, by which she can not only repair the natural waste of her own full-grown body, but from which she can spare enough also to yield so large a supply of nourishing milk?

She must extract them from the vegetables on which she lives, and these again from the soil.

The quantity of solid ma ter thus yielded by the cow in her milk is really very large, if we look at the produce of an entire year. If the average yield of milk be 3000 quarts, or 750 gallons, in a year, (every 10 gallons of which contain bone earth enough to form about 7 ounces of dry bone,) then by the milking of the cow alone we draw from her the earthy ingredients of 33 lbs. of dry bone in a year. These are equal to 40 lbs. of common bone-dust, or 3 1-3 lbs. in a month. And these she draws necessarily from the soil.

If this milk be consumed on the spot, then all returns again to the soil on the annual manuring of the land. Let it be carried for sale at a distance, or let it be converted into cheese and butter, and in this form exported—there will then be yearly drawn from the land from this cause alone a quantity of the materials of bones which can only be restored by the addition of 40 lbs. of bone-dust to the land. If to this loss from the milk we add only 10 lbs. for the bone carried off by the yearly calf,* the land will lose by the practice of dairy husbandry as much bone-earth as is contained in 50 lbs. of bone-dust—or in 45 years every imperial acre of land will lose what is equivalent to a ton of bones.

* It has been estimated that the proportion of bone in the—

Horse - -	= .125 of the live weight.	
Sheep, *old*, (Merino,)	= .125 of *live*, 20 of dead do.	
	= .33 nearly of flesh and fat.	
Pig, unfatted, -	= .17 of *live* .20 of *dead* do.	

After the lapse of centuries, therefore, we can easily understand how old pasture lands, in cheese and dairy countries, should become poor in the materials of bones—and how in such districts, as is now found to be the case in Cheshire, the application of bone-dust should entirely alter the character of the grasses, and renovate the old pastures.

Of the Growing of Wool, and its Effects upon the Soil.

The rearing of wool affords another beautiful practical illustration, both of the kind of food which animals require for particular purposes, and of the effect which a peculiar husbandry must slowly produce upon the soil.

Wool and hair are distinguished from the fleshy parts of the animal by the large proportion of sulphur they contain. Perfectly clean and dry wool contains about 5 per cent. of sulphur, or every 100 lbs. contain 5 lbs.

The quantity as well as the quality of the wool yielded by a single sheep varies much with the breed, the climate, the constitution, the food, and consequently with the soil on which the food is grown. The Hertford sheep, which are kept lean, and give the finest wool, yield only 1 1-2 lbs.; but a Merino often gives a fleece weighing 10 or 11 lbs., and sometimes as much as 12 lbs.

The number of sheep in Great Britain and Ireland amounts to 30 millions, and their yield of wool to 111 millions of punds, or about 5 millions of pounds of sulphur, which is of course all extracted from the soil.

If we suppose this sulphur to exist in, and to be extracted from, the soil in the form of gypsum, then the plants which the sheep live upon must take out from the soil, to produce the wool alone, 30 millions of pounds, or 13,000 tons of gypsum.

Now, though the proportion of this gypsum lost by any one sheep farm in a year is comparatively small, yet it is reasonable to believe that, by the long growth of wool on hilly land, to which nothing is ever added, either by art or from natural sources, those grasses must gradually cease to grow in which sulphur most largely abounds, and which favor, therefore, the growth of wool. In other words, the produce of wool is likely to diminish, by lapse of time, where it has for centuries been yearly carried off the land; and, again, this produce is dressed with gypsum, or with other manure in which sulphur naturally exists. Of course, this general conclusion will not apply to localities which derive from springs or other natural sources a supply of sulphur equal to that which is yearly removed.

Of the Practical and Theoretical Values of Different Kinds of Food.

From what has been stated in the preceding sections, it appears, as the result both of theory and of practice, that different kinds of food are not equally nourishing. This fact is of great importance, not only in the preparation of human food, but also in the rearing and fattening of stock. It has, therefore, been made the subject of experiment by many practical agriculturists, with the following general results:

1. If common hay be taken as the standard of comparison, then, to yield the same amount of nourishment as 14 lbs. of hay, experiments on feeding made by different persons, and in different countries, say that a weight of the other kinds of food must be given, which is represented by the number opposite to each in the following table:—

Hay	10	Carrots, (white)	45
Clover hay	8 to 10	Mangold-wurtzel	35
Green clover	45 to 50	Turnips	50
Wheat straw	40 to 50	Cabbage	26 to 30
Barley straw	20 to 40	Peas and Beans	3 to 5
Oat straw	20 to 40	Wheat	5 to 6
Pea straw	10 to 15	Barley	5 to 6
Potatoes	20	Oats	4 to 7
Old potatoes	40?	Indian corn	5
Carrots, (red)	25 to 30	Oil-cake	2 to 4

It is found in practice, as the above table shows, that twenty stones of potatoes, or three of oil-cake, will nourish an animal as much as ten stones of hay will, and five stones of oats as much as either. Something, however, will depend upon the quality of the sample of each kind of food used—which we know varies very much, and with numerous circumstances; and something also upon the age and constitution of the animal, and upon the way and form in which the food is administered. The skilful rearer, feeder, and fattener of stock knows also the value of a change of food, or of a mixture of the different kinds of vegetable food he may have at his command—a subject we have considered in a previous section.

2. The generally nutritive value of different kinds of food has also been represented theoretically, by supposing it to be very nearly in proportion to the quantity of nitrogen, or of gluten, which vegetables contain. Though this cannot be considered as a correct principle, yet as

ıe ordinary kinds of food on which stock is ed contain in general an ample supply of car- on for respiration, with a comparatively small roportion of nitrogen, these theoretical deter- ıinations are by no means without their value, nd they approach, in many cases, very closely o the practical values above given, as deduced rom actual trial. Thus assuming that 10 lbs. f hay yield a certain amount of nourishment, hen of the other vegetable substances it will e necessary, according to theory, to give the ollowing quantities, in order to produce the ame general effect in feeding:—

Hay	10	Carrots (red)	35
Clover hay*	8	Cabbage	35 to 40
Vetch hay	4	Pease and Beans	2 to 3
Wheat straw	52	Wheat	5
Barley straw	52	Barley	6
Oat straw	55	Oats	5
Pea straw	6	Rye	5
Potatoes	28	Indian corn	6
Old potatoes	40	Bran	5
Turnips	60	Oil-cake	2
Mangold-wurtzel	50		

If the feeder be careful to supply his stock vith a mixture or occosional change of food— nd especially, where necessary, with a proper roportion of fatty matter—he may very safely egulate, by the numbers in the above tables, he quantity of any one which he ought to ubstitute for a given weight of any of the oth- rs—since the theoretical and practical results lo not in general very greatly differ.

3. As has been already stated, however, it is ıot strictly correct that this or that kind of egetable is more fitted to sustain animal life, imply because of the large proportion of ıitrogen or gluten it contains; but it is wisely rovided that, along with this nitrogen, all lants contain a certain proportion of starch or ugar, and of saline and earthy matter—all of which, as we have seen, are required in a mix- ure which will most easily sustain an animal u a healthy condition; so that the proportion of nitrogen in a substance may be considered as a rough practical index of the proportion of he more important saline and earthy ingredi- nts also.

4. It is very doubtful, however, how far this proportion of nitrogen can be regarded as any ndex of the fattening property of vegetable substances. If the fat in the body be produced rom the oil in the food, it is certain that the proportion of this oil in vegetable substances is by no means regulated by that of the gluten or other analogous substances containing nitrogen. The stock farmer who wishes to lay on fat only upon his animals, must therefore be regulated by another principle. He must select those kinds of food, such as linseed and oil-cake, in which fatty matters appear to abound, or mix, as I have already said, (p. 354,) a due proportion of fat or oil with the other kinds of food he employs.

But large quantities of fat accumulate in the bodies of most animals, only when they are in an unnatural, and, perhaps in some measure, an unhealthy condition. In a state of nature there are comparatively few animals upon which large accumulations of fat take place. A certain portion, as we have seen, is necessary to the healthy animal; but it is an interesting fact, that as much as is necessary to supply this is present in most kinds of vegetable food. In wheaten flour it is associated with the gluten, and may be extracted from it after the starch of the flour has been separated from the gluten by washing with water, as already described (pp. 40 and 45.) In so far, therefore, as this comparatively small necessary quantity of fatty matter is concerned, the proportion of nitrogen may also be taken, without the risk of any serious error, as a practical indication of the ability of the food to supply the natural waste of fat in an animal which is either growing in general size only, or is only to be maintained in its existing condition.

While, therefore, it appears from the study of the principles upon which the feeding of animals depends, that a mixture of various principles is necessary in a nutritive food, it is interesting to find that all the kinds of vegetable food which are raised, either by art or by natural growth, are in reality such mixtures of these several substances—more or less adapted to fulfill all the conditions required from a nutritious diet, according to the state of health and growth in which the animal to be fed may happen to be.

An important practical lesson on this subject, therefore, is taught us by the study of the wise provisions of nature. Not only does the milk of the mother contain all the elements of a nutritive food mixed up together—as the egg does also for the unhatched bird—but in rich natural pastures the same mixture uniformly occurs. Hence, in cropping the mixed

* Both cut in flower

herbage, the animal introduces into its stomach portions of various plants—some abounding more in starch or sugar, some more in gluten or albumen—some more in fatty matter—while some are naturally richer in saline, others in earthy constituents; and out of these varied materials the digestive organs select a due proportion of each and reject the rest. Wherever a pasture becomes usurped by one or two grasses—either animals cease to thrive upon it, or they must crop a much larger quantity of food to supply from this one grass the natural waste of all the parts of their bodies.

It may indeed be assumed as almost a general principle, that whenever animals are fed on one kind of vegetable only, there is a waste of one or other of the necesssry elements of animal food, and that the great lesson on this subject taught us by nature is, that by a *judicious admixture, not only is food economised, but the labor imposed upon the digestive organs is also materially diminished.*—*Johnston's Elements of Chemistry and Geology.*

Horse Shoes, and How to Put Them On

The shoe must possess substance enough to prevent its bending, and width of wed enough to ensure protection to the foot; the thickness like the width of web, should continue precisely the s me from toe to heel, and not, as is generally the case. increase as it proceeds backwards until at the heel it becomes fully doubled. This is a great evil for many reasons, and among others that it throws the horse forwards upon the toe, and causes him to strike it against every projection that comes in its way. Now, as horses are sufficiently prone to do this without the assistance of high-heeled shoes, it should be our business to obviate it as much as possible.

In doing this we only carry out in the shoe what nature has already done in the foot; she has arched the toe of the coffin-bone, to diminish the effect of a jar at the toe; and we do the same to the shoe to lessen the cause of the jar. The common practice is just the reverse of this; it welds a lump of steel into the toe, which only increases its thickness, and the number of obstacles that it necessarily encounters, but, being of a harder texture, is longer wearing down, and consequently exposes the foot to the greatest amount of concussion. Supposing a horse to wear his shoes so hard, that they will not last a month—much beyond which, as the foot will outgrow them, they had better not last—then steel the toe; but still let it be turned up as much out of the line of wear as possible. A small clip at the point of the toe is very desirable as preventing displacement of the shoe backwards; it need not be driven up hard, it is merely required as a check or stay. The shoe should be sufficiently long, fully to support the angles at the heels, and not, as is too often the case, so short, that a little wear imbeds the edge of it in the horn at these parts. The foot surface of the shoe should always have a good flat even space left all around for the crust to bear upon; for it must be remembered, that the crust sustains the whole weight of the horse, and needs to have a perfectly even bearing everywhere around the shoe. In this space the nail-holes should be punched, and not, as is too often the case, partly in it, and partly in the seating. In what is technically called "black-holing the shoe," which means completing the opening of the nail-holes on the foot surface, great care should be taken to give them an outward direction, so as to allow the points of the nails to be brought out low down in the crust. The remainder of the foot surface should be carefully seated out, particularly around the elevated toe, where it might otherwise press inconveniently upon the sole; and I would have the seating carried on fairly to the point where the crust and the bars meet, in order that there may be no pressure in the seat of corns; the chance of pressure in this situation will be further diminished by bevelling off the inner edge of the heels with a rasp.

The ground surface should be perfectly flat, with a fullering or groove running round the outer edge, just under the plain surface, whereon the crust bears. The principal use of the fuller is to receive the heads of the nails that secure the shoe, and prevent their bending or breaking off;—it is further useful in increasing the hold of the shoe upon the ground, and with this view I always have it carried back to the heels.

The danger apprehended from the shoe being applied to the foot so hot as to burn the crust, and cause it to smoke, is utterly groundless.—I would not have it made to burn itself into its place upon the foot, without the assistance of rasp or drawing-knife, but I would have it tried to the foot sufficiently hot to scorch every part

hat bears unevenly upon it; because the advantage of detecting such projecting portions is very great, and this mode of accomplishing it is positively harmless. Indeed it is the only one by which the even bearing necessary to a perfect fitting of the shoe can be insured.

No shoe should ever be nailed to the foot until it has been ascertained that the pressure of the hands is sufficient to keep it steadily in its place, and preclude any appearance of daylight between it and the foot; for, if the shoe does not accurately correspond to the surface of the foot, but is disposed to shift about upon it, the nails will be exposed to a constant strain in order to keep it in its place; whereas they should merely have to hold it to the foot, and not, as it were, to keep it there by force.

The shoes should not be permitted to remain on the horse's feet more than two or three weeks without removal; for in that time the heads of the nails will have become worn, and, from fitting the holes less perfectly than before, will admit of a trifling motion of the shoe upon the nails; whereby the holes in the hoof will be enlarged and the security of the shoe endangered. Another reason for removing the shoes, is the opportunity which it affords of paring away those portions of horn which in a state of nature would have been worn down by contact with the ground.

The circumstance to be considered is one of vital importance to our object, as upon it depends the amount of disturbance that the natural functions of the foot are destined to sustain from the shoe; viz., the number and situation of the nails which are to secure it to the foot. If they be numerous, and placed back in the quarters and heels, no form of shoe, be it ever so perfect, can save the foot from contraction and navicular disease. If on the contrary they be few, and placed in the outside quarter and toe, leaving the inside quarter and heels quite free to expand, no form of shoe is so bad that it can, from defective form alone, produce contraction of the foot.

Three years ago I commenced a series of experiments upon shoeing, with a view, among other things, to ascertain how few nails are absolutely necessary, under ordinary circumstances, for retaining a shoe securely in its place. The subjects of my experiments were six horses of my own, and three belonging to friends; the nine among them representing very fairly the different classes of pleasure horses; not indeed including hunters or race-horses, each of which require a separate and totally different treatment, but carriage horses, ladies' horses and roadsters; and they also included the common variations in form and texture of the generality of horses' feet.

When my attention was first directed to the subject of nailing, I was employing seven nails in each fore, and eight in each hind shoe. I then withdrew one nail from each shoe, thus reducing the number to six in the fore, and seven in the hind shoe; and finding at the end of a year that the shoe of all the horses had been as firmly retained as formerly, I withdrew another nail from each shoe, leaving only five in the fore shoes and six in the hind. I found, however, that six nails would not retain the hind shoes of a carriage horse, without allowing it sometimes to shift; so I returned to seven in the hind shoes, and have continued that number ever since; but five retained all the fore shoes as firmly during the whole of the last year and a half, as six had previously done.

I have invariably directed and superintended the whole operation of shoeing during these experiments; and have always been very careful to mark that the nails were not driven high up in the crust, but brought out as soon as possible; and that they were very lightly driven up before the clinches were turned down, and not, as is generally the case, forced up with all the power that the smith can bring to bear upon them with his hammer. I mention these circumstances to show that my object really was to ascertain how little would retain a shoe, and to what extent the foot might be relieved from the evil of unnecessary restraint; a matter sometimes of great moment, and at all times desirable.

The clinches should not be rasped away too fine, but turned down broad and firm. The practice of rasping the whole surface of the hoof after the clinches have been turned down, should never be permitted; it destroys the covering provided by nature as a protection against the too rapid evaporation of the moisture of the hoof, and causes the horn to become dry and brittle.

Two of the horses alluded to above, worked for some time with only four nails in their fore shoes.

I have detailed these experiments with a view to expose the groundless nature of the fear that expects to cast a shoe at every step, unless it be held to the foot by eight or nine nails, driven high into the crust. If the presence of a nail in

the crust were a matter of no moment, and two or three more than are necessary were *merely useless*, there would be no great reason to interfere with this practice of making "assurance doubly sure;" but it is far otherwise,—the nails separate the fibres of the horn, and they never by any chance become uniteo again, but continue fissured and unclosed, until by degrees they grow down with the rest of the hoof, and are ultimately, after repeated shoeings, removed by the knife.

If the clinches should happen to rise, they must be replaced without delay; as such rising imparts to the nails a freedom of motion which is sure to enlarge the size of the holes,—and this mischief is often increased by the violent wrenching which the shoe undergoes from side to side in the process of removal by the smith.

Now as these holes cannot possibly grow down, and be removed under three shoeings, it will be found that even with seven nails, the crust must always have twenty-one of these separations existing in it at the same time; and as they are often from a variety of causes extended into each other, they necessarily keep it in a brittle, unhealthy state, and materially interfere with the security of the future nail hold. Unluckily the common practice under such circumstances is to increase the number of nails, with the view of ensuring the security of the shoe, which increases the evil. My object is to show that these shaky places, as they are called, may be relieved by the omission of one or two of the nails, without endangering the security of the shoe. Suppose the number employed to be seven,—to gain such an end they may safely be reduced to five, which is the largest number I have employed for more than two years; and until I discover some good reason for increasing it, is the largest I intend to employ. But I am far from advising the general adoption of this number; for if from imperfect fitting of the shoe misplacement of the nails, neglect of removing in proper time, or from any nther cause the horse should chance to cast a shoe, the whole blame would be attributed to the five nails, and the poor beast in all probability be doomed to eight or nine for the remainder of his life. I do however, very strongly advise the adoption of six, knowing them to be fully sufficient for retaining the shoes of all pleasure horses under all circumstances, except perhaps hunters. Since the foregoing was published, Colnnel Luttrell, master of the Somersetshire fox-hounds, has informed me that the horse which he rode most frequently last season was shod with six nails only,—not one of which, in consequence of his cutting a good deal, was placed in the inner quarter,—and that he experienced no inconvenience whatever from the plan. If I had entertained the smallest doubt about their efficacy, it would have been entirely removed on the arrival of the Thirteenth Light Dragoons last year in Exeter; for among the horses nf that regiment, I found, through the kindness of Lieut. Col. Brunton, who allowed me to inspect the shoeing, strong confirmation of the truth of the position. Here were horses with a variety of feet shod with six nails only, and these all placed in the outside limb and toe of the shoe, all the remainder of the shoe, remaining free and unattached tn the foot. Mr. Legrew, the very intelligent veterinary surgeon of the regiment informed me that he had not employed more than six nails for nearly two years, and that the loss of a shoe was a very rare occurrence with them, even on a field day, than which there is scarcely any work more trying to the security of horses' shoes. Any mode of fastening that has proved itself equal to retaining the shoes through a long field-day, in stiff ground, may very safely be recommended as fully sufficient for all ordinary purposes.

The question of the efficacy of six nails for road work is settled, I should think, to the satisfaction of the most skeptical, by the fact of the Thirteenth having done the Queen's escort duty during their year at Hounslow without the loss of a single shoe. Any one acquainted with the rapid pace at which her Majesty invariably travels on the road, will readily admit the sufficiency of the test.—*Miles on the Horse's Foot.*

Salt and Guano.—Recent experiments, stated in the Mark Lane *Express*, go to the show that common salt is a valuable addition to all applications of guano to the soil. It not only has a tendency to give trength and hardness to the straw, (which guano weakens,) but prevents the loss of ammonia, which is constantly going on even in a dry atmosphere. M. Barral, the editor of a French agricultural journal says: 'We left in open air, in plates, during 15 days, equal weights of the pure guano and guano previously mixed with salt. At the end of that time we examined anew the amount of nitrogen, and found

that the pure guano had lost 11 6 per cent. of its nitrogen, while that mixed with salt had lost only 5 per cent." The *Express* recommends the use of refuse salt from fish packers for this purpose; and any refuse salt would probably answer the purpose.

Fro the New England Farmer.

The Profit of Fattening Swine.

BY F. HOLBROOK.

In an article in the *Monthly Farmer* for April, 1854, I endeavored to show that swine may be profitably fattened in New England; and in the *Farmer* for May, 1854, and again in that for July, 1855, I gave the results of experiments in feeding pigs, instituted for the purpose of testing the soundness of the views advanced in my first article. Since writing those papers, I have made yet another trial of the cost and profit of feeding; and will now give the details.

On the 2d of January, 1856, I commenced feeding five lean shoats, weighing respectively, 80, 77, 70, 66 and 61 lbs., gross weight. They were placed in apartments consisting of a compost pen, about 10 feet wide, by 14 feet long, and an eating-room connected therewith. The litter made by two horses was daily thrown into the pen; scrapings from the woods, consisting of leaves, decayed sticks and rich mould, were occasionally added, say two loads or a cord once a fortnight; and clean straw was frequently given to the pigs, which they arranged in the pen, for bedding, to suit themselves. It was quite an advantage to have the pigs make the bed in the compost heap, as the pen not being very large, the whole heap was influenced by the heat gererated by the pigs while lying in their bed, so that it did not freeze deeply, even in the coldest weather. The litter from the horses also contributed to keep out frost.

As in the experiments heretofore made, so also in this, the pigs were fed on corn and cob meal,—the rule being to give them all they would eat with a good appetite, and keep the trough clean. Immediately after feeding them at a given time, the meal for the next feeding was placed in the bucket, hot water poured on to scald it, and the wash of the kitchen afterwards added, the mess standing in a warm place the while, to soak and swell. Each grist of ears of corn, when put up to be ground for the pigs, was carefully measured, and at once charged to them, so that all shrinkage from toll taken out or otherwise, was placed to their debit. Entire accuracy was aimed at in keeping the account.

The pigs wore thus treated till the 8th of April last, when they were sold to the butcher at 9 cents the pound, dressed,—he charging for the slaughtering. The five weighed, dressed, 785 lbs. They consumed eighty-four bushels of corn and cob, or forty-two bushels of clear corn. During the time of feeding, they were supplied with twelve loads of raw material from the woods, which they pulverized and enriched, and mixed with the litter from the horses and the straw for bedding, making up a compost of the best quality, both as regards material and mode of manufacture.

Corn was worth in January last, in this market, about one dollar and ten cents per bushel; but has been gradually falling in price, till now it is about eighty cents, by the quantity.

The five pigs may be accounted with as follows:

785 lbs. of pork, net, at 9 cents per lb.		$70,65
Deduct 84 bushels corn and cob, or 42 bushels clear corn, at an average price of $1 per bushel,	$42,00	
Deduct paid for slaughering the five,	3,75	
Deduct paid for the lean shoats $4 each,	20,00	65,75
Balance, above the market value of corn consumed,		$4,90
And the pigs have converted 12 loads of raw material into good compost, worth a bushel of corn, or $1 per load	$12,00	
From which, if you please, deduct the cost of furnishing material, say 50 cents per load, which is pretty high	6,00	6,00
Profit on the five pigs		$10,90

This is the sixth experiment I have made, to ascertain the cost and profit of fattening swine, and it shows less profit than any other one of the six; and I attribute the smaller return mainly to the extreme and long-continued cold weather of the past winter. Probably, if I had fed these pigs a month longer, so as to have given them the advantages of warmer weather, to lay on fat, the gain in proportion to the corn consumed would have been materially greater than now appears. However, extremely unfavorable as the season was, yet the pigs paid more for the consumed, than it could have been sold for in market, by the quantity, and supplied a pile of compost worth more than they get credit for in the account.

Here, in New England, we must use all resources available at a reasonable cost, if we would keep our best lands up to the desirable pitch of fertility, and much more, if we would improve those that have been worn by long and severe cropping, or that never, by nature, had more than a thin hungry soil. The means for the most part employed must be those afforded by the farm itself. My object, in all these experiments with swine, has been to show to myself and to others, one of the ways in which the products of the farm may be disposed of so as to give them back to it in compost with materials otherwise lying waste or idle, and get as good a price for the crop as though it had been directly exchanged for money. Here is the policy for him who desires to live by farming: so direct the business as to obtain a reasonable return for capital and labor invested, without robbing the soil. He who, eager for a present income, regardless of the future condition of his farm, takes all from it he can get, returning little or nothing back, is not unlike the man in the fable, who fortunately possessing a goose that laid a golden egg every day, was not content with so sure but slow, an income, and thinking to seize a large treasure at once, mangled and tortured the faithful goose, and in the end lost all.

F. Holbrook.

Brattleboro', May 27, 1856.

Culture of Potatoes.

An interesting discussion on this subject was had at a late meeting of the American Institute in New York. The experience of different persons seems to lead to opposite conclusions on this, as on many other topics. Our readers will remember a very different course from that here recommended, was advised by a practical writer, who gave his experience on the speedy raising of potatoes, which was published in one of our recent issues.

In the recent debate, Mr. Sears, of the Phalanx, New Jersey, said they experienced largely on the best manner of preventing potatoes from rotting, and found that they kept best when taken immediately from the field as soon as dug, and put in slated bins in a cellar, where the air could circulate through the pile, but no light ever came to them. He never observed any difference in their keeping, whether put up wet or dry. Their potatoes grew in dry land, the soil of which did not adhere much to the tubers.

Prof. Nash, of Amherst, Mas., had long been satisfied that potatoes never should be exposed to the light. Many farmers are in the practice of sunning their potatoes all day after they are dug. It is a bad practice—no matter how damp they are, or how much dirt adheres to them. My father used to raise large crops of potatoes, and his method was to have them put in carts as fast as dug and hauled to the house, and dumped into a shute that led down to the bin cellar. In the spring the potatoes under the chute were found buried in earth, and were always the soundest and best, and yet had always been in damp soil. They were often as fresh in May, as when they were dug in October. Probably the true economy of growing potatoes is to plant them in light land on inverted turf, and only calculate upon a light crop. They are certainly less liable to rot in such land than in richer soil. I would plant them in four-inch furrows and cover them with a harrow, and just then the plants begin to look out, give them another harrowing, and after, hoe once, but raise no hills. A good after-dressing may be made by mixing four bushels of ashes, one bushel of plaster, and half a bushel of salt, and give twelve to twenty bushels to the acre.

Judge Meigs.—If the soil is wet I would hill; if dry, level culture will do.

A Connecticut farmer said he planted a piece of under-drained swamp, one half in ridges and one half flat, and that the first produced a good crop, while the flat culture was a decided failure.

Robert L. Pell.—Col Muir, of Scotland, has produced potatoes from clay forty feet below the surface. This contradicts the idea of the potato being indigenous solely to America.

Prof. Nash.—Forty years ago the people of Deerfield, Mass., adopted the level system of potato culture, because experience taught them it was far preferable; yet so slow are the farmers to adopt new systems, that the plan has not spread out fifteen miles from the original starting point. I do fully believe that the loss in hilling corn and potatoes in Massachusetts during the 225 years that it has been practiced, both in loss of labor and productiveness, would make a sum sufficient to purchase the whole State, both real and personal property.

Robert L. Pell.—I planted potatoes on a drained swamp, and found that the rows over

the drains were far superior to others. From further experiment I became satisfied that the effect was produced by the circulation of air through the drains and the soil. I raised 425 bushels per acre; I used no manure, because the soil was that of a bog swamp. I afterward put 200 bushels of lime per acre, and then hauled out and used the muck, and found it as good as manure.

Mr. Lowe said that raw muck put upon sandy land makes good manure for potatoes. So does spent tan bark.—*Ex. Paper.*

From the Tarboro Southerner.

Foster's Cotton Seed Sower.

Mr. Howard: As an act of simple justice to a recently invented implement, I pen this notice. I allude to Foster's Cotton Seed Sower, which was patented during the month of January of this year, and first exhibited here at our March Court. Being defective in several particulars, it was taken to Norfolk and the suggestions made by some of our most practical planters carried out. It was again exhibited at several farms in the county during the cotton planting season and practically tested. The working of the machine gave satisfaction to proprietors and overseers. Several of the latter were heard to say they would have been pleased to have had the use of one through the planting season.

It was worked on the farms of Messrs. W. S. and T. W. Battle, and Mr. Henry Mordecai, up the river, and on Mr. Baker Staton's and on Panola, in this vicinity, and on one or more farms on Town Creek.

So far as we have heard, the cotton seed sown by the implement has come up well, and we regard its working as a success beyond dispute.

About 5 acres were planted with it on Panola, which is up well and presents a more uniform appearance than the hand-sowing, and it is generally conceded by practical men, that it will be easier to work both with plows and hoes, when the cotton presents a straight line and the stand is uniform.

We have heard the opinion expressed (in which we entirely concur) by some of our most experienced planters, that Foster's Cotton Seed Sower will mark an era in cotton planting.

The implement is the invention of a Mr. Foster, of Palmyra, Wayne county, New York, and was introduced here by Dr. E. C. Winchester.

Dr. W. informed me that he would have one on exhibition at our next State Fair in October, and would have them for sale by the next cotton planting season.

Very respectfully your obt. servt.
JNO. S. DANCY.

Star and Adamantine Candles.

Editors Southern Cultivator—Several of your correspondents have desired information in reference to the manufacture of star and adamantine candles, from lard and tallow. No process has as yet been announced (with my knowledge) which is economical and at the same time of easy application for the farmer or house-keeper. A short account of the process actually employed in the manufacture on a large scale may not be uninteresting to your readers, some of whom may be able to simplify it so as to produce a tolerably satisfactory result.

Tallow, suet, lard and other fats consist, for the most part of three proximate principles—stearic, magaric and oleic acids—united with glycerine as a base. The compounds thus formed are termed stearine, margarine and oleine. Stearine is white, inodorous and tasteless; at ordinary temperature it is firm and brittle; melts at 142 deg. Margarine closely resembles stearine, and is with much difficulty entirely separated from it. It differs from stearine in being somewhat softer and melts at 115 deg. Oleine differs widely from these in being liquid at common temperatures, and indeed when pure, becoming solid only at 40 deg. below zero. The consistence of a fat depends upon the relative proportion of oleine. Beef fat contains 25 per cent, mutton suet 26, hog's lard 62, goose fat 68, duck fat 72, olive oil 72. If the fat be designed for burning in lamps, the larger the per centage of oleine the better; if in candles, on the other hand, the less the better. The object to be aimed at, then, in the conversion of a fat into candles, is the removal of the oleine so far as is practicable. This is done most readily by pressure. The fat is melted and when nearly cold again is expressed by a very gradually augmenting force, which is increased to a strong power. Much of the oleine with portions of unsolidified stearine and margarine flow out from the mass, and the residue is fit for candles; or if it be desired to render them still harder, the stearine is re-melted and

pressed again. This process yields a firm, hard candle of excellent quality. The pressure may be obtained by wedges, or the cotton screw or press might be used for this purpose where considerable quantities are operated upon, by adopting a suitable pressing-box.

It has been ascertained by experiment if the glycerine be removed from the stearine, the quality of the candles is greatly improved. This is effected by a variety of processes. If 100 lbs. of tallow be melted and 14 lbs. of lime suspended in water in the form of milk, be added and the whole stirred for two or three hours, the transparent layer of melted tallow on the surface will have been converted into a gray crumbly mass. This is a compound of the fatty acid with lime—is, in fact, a true lime soap. The glycerine liberated in the process remains dissolved in the water beneath, which is separated from the soap and yield the glycerine of the drug shops. The fatty acids must now be liberated from the lime. This is effected by heating it with 18 1-2 per cent of its weight of sulphuric acids (oil of vitriol (diluted with a large quantity (70 times the bulk) of water. The whole resolves itself into three distinct layers—fatty acids on top, water beneath and sulphate of lime (Plaster Paris) at the bottom. The fats are skimmed off and submitted to powerful pressure, by which the oleic acids is removed and the pearly white stearic acids remain, to be formed into candles.

By another process the melted tallow is acted upon directly by sulphuric acid, which separates the acid fats on top while the mineral acid and glycerine form a compound below. This mode is objectionable on account of the color imparted to the fat by the action going a little too far. A year or two ago, Mr. Tilghman, of Philadelphia, patented a process for obtaining the acids from fats of all kinds by means of water at a high temperature (that of melted lead) and under high pressure. He effects this change in a close vessel of sufficient strength, or by circulating the mixture through a long coil of strong tubing placed over the furnace. In either case, a complete separation takes place; the fatty acids float and glycerine is dissolved in the water. The latter is separated and the oleic acid expressed as before. The glycerine is extracted and thrown into market also.

It is questionable whether any of these processes can be satisfactorily caried out on a small scale, and if it could, would it not oe better for a large number of planters and farmers, in effect, by their patronage, to hire a man of experience to erect the necessary machinery and conduct the process, they paying him partly in provisions and fuel, which he must necessarily consume, and the residue in crude material for the manufacture? This is the way we get our meal, flour and lumber, and we find it much more economical than beating corn in a mortar or ripping plank out of a log with a hand-saw. The manufacture of lard oil or soap should be combined with the production of candles to consume profitably the oleine and oleic acid, and the glycerine should be recovered, at least in a crude state, for the manufacturing chemist. Such an establishment seems to be desirable in a favorable locality in Texas, where tallow is a drug. The Southern candle trade is an item of large importance, and should be supplied from our own resources.

This is a subject, Messrs. Editors, not strictly agricultural in itself, but of interest, it seems, to a class of your readers; and with a view to setting them right, it is offered, with the hope you may find it worthy a place R. B.

Rome, Ga., May, 1856

Cider Wine—Apple Cordial.

Being aware that much wine sold for genuine champaigne was manufactured from cider, we informed a correspondent a short time since of this fact in answer to his inquiry. The following letter was elicited by the reading of the answer referred to:

Messrs. Editors—I am well aware that imitation wines are now extensively made in the State of New Jersey from the juice of the apple, and more from Harrison Apples than from any other variety, and the most of it is made at Newark. Those *knowing* ones are correct with regard to its being a mixture of poisonous drugs not fit for the human stomach.

Having been in the horticultural business for over forty years, I have had an eye single to those spurious wines from the juice of the apple.

It is gratifying to me to think that when you come to taste and test the wine—which I send you accompanying this letter—you will find a wine, a pure article, free from all drugs, and

not an imitation. The sample I send you is eighteen months old, and made after the following process:

Take pure cider made from sound ripe apples as it runs from the press; put 60 pounds of common brown sugar into 15 gallons of the cider and let it dissolve, then put the mixture into a clean barrel and fill the barrel up to within two gallons of being full with clear cider; put the cask in a cool place, leaving the bung out for 48 hours; then put in the bung, with a small vent, until fermentation wholly ceases, and bung up tight, and in one year the wine will be fit for use. This wine requires no racking,—the longer it stands upon the lees the better.

STERNE BRUNSON.

Elhart, Indiana, April, 1856.

[It will be observed that our correspondent has, for the benefit of all concerned, described the method of making pure cider wine, and it is for us to say something regarding the sample he sent us. It is a good cider wine, the best we ever tasted. If it had any fault, it consisted in being a very little too sweet. This can be remedied by using less sugar than the above-named amonut. A barrel of cider contains 31 gallons. Wine from currants can be made in the same manner exactly.]—*Scientific American.*

Food for the Sick.

What shall I eat? How often this question is asked by the sick, or those with delicate appetites. Nature demands food, but the appetite does not crave it, and the mind of the feeble invalid cannot fix upon anything that he will relish.

It may relieve such sufferers to point out a few suitable articles of food, such as are easily prepared, and usually tempt delicate appetites.

Here is one particularly New-Englandish:

"Cut some codfish to bits the size of a pea, and boil it in a minute in water to freshen it. Pour off all the water, and add some cream and a little pepper.

"Split and toast a Boston cracker, and put the above in it. Milk and a little butter may be used instead of cream.

"Ham or smoked beef may be prepared in the same way. For a variety, beat up an egg and stir it in, instead of cream, or with the cream.

"These preparations are also good for a relish, for a family, for breakfast or tea."

Another excellent dish for sick or well, and economical withal, is made by taking a few cakes of pilot bread and soaking them till partially soft, after breaking them into mouthfuls, in just water enough to be all absorbed: then cut a slice of fat salt pork into very small pieces, fry it crisp, pour it over the bread, and heat the whole in a stove or oven, or in a spider.

Another plan is to pour over the bread a sweetened butter gravy, or wine sauce, or the juice of stewed fruit or preserves. All are good.

A very excellent food for delicate stomachs may be made by sweetening water, cold or hot, with refined sugar, and crumbling into it stale bread.

Bread and cider used to be a favorite food in Yankee land, in old times. Sweeten the cider, and crumble into it toasted bread.

Beef tea is very nourishing, if rightly prepared. Take perfectly lean parts of fat beef, cut into cubes half an inch square, and soak it some hours in cold water, and then boil all together for an hour. You may improve this by adding a toasted cracker on each bowl-full.

Mutton or chicken tea should be made in the same way, and rice may be added to either, to make it food as well as drink.

Sometimes a piece of codfish or a slice of fat salt pork, roasted upon live coals, will tempt a convalescence appetite when nothihg else will answer.

In making porridge of corn or oatmeal, be careful to cook it well. Don't think it done till it has boiled an hour.

Rice gruel does not need so much cooking. It should not be given to a person of constipated habits. Simple boiled rice is a delicate food for the sick.

Arrowroot, tapioca, furina and corn starch are all of the same character—highly concentrated food. A good gruel may be made of either, and flavored with sugar, nutmeg, lemon, &c. Stale bread, very dry, crumbled and made into gruel is, perhaps, the most digestible. Stale bread toasted very dry and brown, and then steeped in water a long time makes a good drink for the sick, and furnishes considerable nourishment.

In all cases of sickness, when the appetite

craves fruit we would give it, ripe and fresh in its season, or preserved and cooked in the most simple manner. Apples for the sick, should always be roasted. So should potatoes.

If the friends of the sick possess a little skill and neatness in the preparation of dishes, the patient need never say, "What shall I eat?"

Benefit of Agricultural Fairs.

Every thing from the lips or pen of Daniel Webster still continues to be read with interest. The following is an extract from an address of his, delivered at the annual fair of the Norfolk Agricultural Society, at Dedham, Mass., in the year 1849.

"The principle of association—the practice of bringing men together bent on the same general end, uniting their intellectual and their physical efforts to that purpose is a great improvement in the present age. We saw it years ago—perhaps I might say centuries ago. It began in the professional associations of the world—in the legal, the medical, and the theological. But it was long, in that country and in this, before the principle of combination came to be acted upon in the great system of Agriculture—before it was brought to that pursuit of life which is the main pursuit of life—before agriculturists were brought to act in unison. And the reason is obvious. In the city, communities strive together. The merchants and ship owners can come together at the sound of a bell. The mechanics, generally, living in populous places, may do the same. They have the opportunity of interchanging sentiments every hour, and what one knows, all know, and what is the experience of one, all soon become acquainted with. But the agricultural population is scattered over all the fields of the country. Their labors and their toils are, in some degree, isolated. They are in the midst of the hills and the valleys and in the recesses of every solitary forest. There is no 'Change' for them to assemble upon at noon. There are no coffee-houses, there are no Atheneums for them to meet at in the evening and converse on their interest.

"It has, therefore, become essential to the best interests of the farmers of the commonwealth, that these annual fairs should be established, and that they should be universally attended. And, as His Excellency, the Governor, has remarked, it is not so much on account of what is to be learned by the most eloquent discourse in the public houses or at these establishments, as from the meeting of men together who have the same general object, who wish for improvement in the same general pursuits of life that they may converse with one another—that they may compare with each other their experience, and that they may keep up a constant communication. It is in this point of view, that these annual fairs are of importance.

"Why, gentlemen, every man obtains a very great portion of all that he knows in this world, by conversation. Conversation, intercourse with other minds is the general source of most of our knowledge. Books do something, but every man has not the opportunity to read. It is conversation that improves. If any one of us here to day, learned, or unlearned, should deduct what he has learned by conversation from what he knows, he would find but little left, and that little not of the most valuable kind. It is conversation—it is the meeting of men face to face, and talking over what they have common in interest—it is this intercourse that makes man sharp, intelligent, ready to communicate to others, and ready to receive intimations from them, and ready to act upon those only which they receive by this oral communication.

"Therefore if there were not a thing exhibited—if there were not a good pair of steers, nor a fine horse, nor likely cow in the whole country, if there be society—if there be ladies, wives and daughters—if there be those connected with the tillage of land, I say that these annual meetings are highly important to progress in the art to which they refer. I come here as a poor farmer, to meet with other better farmers, ready to receive from them any intimations their experience may have taught, and desirous only of suggesting something for their reflection which now or hereafter may draw their attention, and draw it usefully to something in the agricultural art."

Remedy for the Striped Bug.—Peruvian guano, dusted over the vines while the dew is on. One application last year was sufficient on my vines.—H. O. C.

Let us be careful to guard against the groundless imputations of our enemies.

From the Cincinnati Railroad Record.

Cotton Seed and its Uses.

In looking over the annual reports of the products of this great staple, one cannot fail to observe that the only products of the cotton crop, extensive as it now is, is the fibrous covering of the seed, the cotton of commerce. The seed itself, the real fruit of the plant, is now of no absolute value except to manure the fields. And when it is considered that nature, in most agricultural products, has made the fruit itself of more value than its covering, it will be readily conceded that the present cultivation of cotton presents an anomily in agriculture, and one which an analogy would lead us to suppose could hardly exist. What if the producer of flax should throw away, for one year only, the ripe seed of his plant, would it not be a commercial calamity, to be regretted by every citizen of the world? If the grower of the wheat or corn, or oats, should content himself with product of his farm in chaff, would not civilized nations at once condemn his folly and compel a change of policy? It is true that the value of chaff in the one case, and flax in the other, would ilily repay the labors of the cultivator; but if they paid him a thousand fold, would he not be equally unwise to waste a large portion of the product with which the bounty of nature has repaid his toil? He has sown his seed, nature has given the harvest, and the wise man will make as much of it as he can. And so we conceive it must be with the cotton crop. The cotton fibre is not the only nor the largest portion of the return of the soil, yet it is at present the only portion that has value, because the only portion applied to the arts, or made to minister to the wants of man.

But is the refuse of the cotton crop of no value? Is there no purpose, in the wide range of arts or manufactures, to which it can be applied, and be a source of profit to the planter? In seeking the solution of this question, we shall consider, first, the amount of this refuse at the present moment, and afterwards the uses to which it may be applied.

First: The amount of the refuse of the cotton crop. As near as can be ascertained, about 5,000,000 acres of land are planted with cotton; the average product of this land is a little over 300 pounds to the acre, baled cotton, making according to the author of "Cotton is King," in 1853 a total production of 1,600,000 000 pounds of baled cotton. Now, *one pound* only of baled is obtained from *three and one-third pounds* of the rough product. We have, then the following statement of the cotton product of the country in 853:

Total product of the field, -	6,333,000,000
Total baled Cotton, - -	1,600,000,000
Refuse thrown to waste, -	3,733,000,000

This, then, develops the remarkable fact that the *refuse of the cotton crop is, in weight, two and one-third times as great as the present available product of the cotton culture.* If cotton is King now, when only thirty per cent. of the fruit of the cotton plant is made available, what will be the importance of this great staple when the plantation shall yield one hundred per cent. of valuable and available product?

Second: The uses to which the refuse of the cotton crop may be applied. The refuse of the cotton crop consists of the seed and a residue of the fibre still adhering to it, in the ratio of about forty per cent. of fibre, and sixty per cent. of seed.

The Fibre.—The fibre immediately covering the seed is worthless to the spinner, but may nevertheless be made available in the arts, for just such purposes as the worn out fabrics of the manufacturer are now employed, and will supply a commercial want that has long been felt, and for which ingenuity, misdirected, has long sought. This worthless fibre, subjected to proper preparation, will furnish a valuable supply of material for paper making. Assuming the value of this to be the same as the cheapest rags in market, and we have—

Total refuse, - - -	3,733,000,000 lbs.
Fibre 40 per cent. - -	1,493,200,000 "
Value at one cent per lb.,	$14,932,000

Now, allowing twenty per cent. for wastage in manufacture, the usual allowance of paper makes, and the quantity of paper made annually from this refuse would be as follows:

Fibre, - - - - -	1,493,200,000 lbs.
Waste 20 per cent. - -	298,640,000 "
Paper, - - -	1,194,560,000 "

Estimating this as common wrapping paper, at the average price of wrapping paper per pound, and we have 1,194,560,000 lbs. paper, at 5 cents, $59,728,000.

And when it is considered that at least two-thirds of this material is suitable for the manu-

facture of the fine printing paper, worth from 11 to 14 cents per pound, this will be found to be a low estimate.

A large portion of the profit of this manufacture would accrue to the cotton growing States, as the labor necessary to be bestowed on paper making is comparatively little.

To paper makers and those connected with the press, who know the commercial want of such a material, we need saying nothing of the value of such a supply at the present moment. The most careless observer cannot fail to perceive the important bearing which such a saving annually would have on this portion of our agricultural, manufacturing and publishing interests.

THE SEED.—The seed of the cotton plant is, in itself, by no means a worthless material.—Like flax and other seeds, it contains a large per centage of oily matter, which can be extracted and applied to useful purposes. Recent experiments have shown that cotton seed oil is one of the most valuable for both illuminating and lubricating purposes. In these respects, it ranks equal to the best sperm oil; but, in our calculations of its value, we shall put it as equal only to the cheapest grease in the New York market.

Cotton seed, when compressed, yields 30 per cent. of oil and 70 per cent. of oil cake. Assuming the same data as before, the yield of oil would then be as follows:

Total refuse of crop,	3,733,000,000	lbs.
Clean seed 60 per cent.	2,239,800,000	"
Oil 30 per cent. of last amount,	671,940,00	"
Oil cake 70 per cent.	1,567,860,000	"

VALUES.

The cheapest grease offered in the New York market now sells at 10 cents per pound. Assuming this to be the value of cotton seed oil, and we have the following result: 671,940,000 lbs., at 1-2c. per pound, $67,194,000.

The value of this oil, reduced to gallons, would be 75 cents per gallon. The cheapest lard oil in the Cincinnati market at the present time is 90 cents.

Cotton seed oil contains the Stearic principles of other vegetable and animal oils, and is, therefore, suitable for the manufacture of star candles

The residue, after the extraction of oil, is oil cake, and is valuable for feed. Other oil-cake sells at one cent per pound. We shall estimate this at one half cent per pound. Its value, then is—1,567,860,000 lbs. oil, at 10c. per lb., $7,839,300.

But there is another method by which the oily matter of cotton seed may be extracted, which is applicable to the purposes of the manufacturer, as requiring less labor and less mechanical outlay and skill; we refer to the method of chemical saponification recently invented by Edgar Conkling, Esq., of this city. The advantages possessed by this method are its simplicity and greater production of oily matter. If this method were universally adopted by Southern manufacturers of soap, no portion of the world could compete with the South in the manufacture of that article. It yet remains for chemists to show whether the refuse of the oil maker may not yield starch in abundance, and a valuable dye. We already know that the present residum is an excellent manure.

CONCLUSION.—It would seem, then, from the considerations already mentioned, that we annually waste 3,733,000,000 pounds of valuable vegetable products, the value of which may be briefly summed up as follows:

Paper,	$59,728,000
Oil,	67,194,000
Oil-cake,	7,839,300
	$134,761,300

Allowing one half for manufacturing, and there would still remain a clear gain to the country as profit and for cost of material $67,380,650, over fifty per cent. of the present value of the cotton crop.

TO DIVEST CALVES OF VERMIN. It often happens that calves become covered with vermin, causing them to lose flesh and look very dull.—To clean the calf is a very disagreeable piece of work; but if the following receipe is adhered to, they will become clean with a very little trouble. Give the calf a tablespoonful of brimstone for three mornings in succession; if one trial does not completely rid the calf, the second will never fail. I have tried it several times, and once has been enough in each instance.

THE New Jersey Geological Report states that the ocean is steadily and rather rapidly gaining on the shore. At Cape Island, the waves have gained on the beach fully a mile since the Revolution, and the rise of the tide on the eastern uplands is higher than formerly in the opinion of the oldest observers.

Juice of the Water-Melon.

A correspondent of the Prairie Farmer presents the following method of using water-melons:

"I endeavor, every year, to raise a good water-melon patch. They are a healthy and delightful fruit, I think. I cultivate the icing variety; plant early in May, and again towards the end of the month, so that they may come in succession. When they commence ripening, we commence cutting, and use them freely during the hot weather. When the weather becomes cool in September, we haul a quantity of them to the house, split them open, with a spoon scrape out the pulps in a cullender, and strain the water into vessels. We boil it in an iron vessels, then put in the apples or peaches, like making applebutter, and boil slowly until the fruit is well cooked, then spice to taste, and you have something that most people will prefer to apple-butter or any kind of preserves. Or the syrup may be boiled without fruit, down to molasses. We have made in a fall as much as ten gallons of the apple-butter, if I may so call it; and molasses which has kept in fine condition until May."

Ground Moles.

The editor of the Sumpter Watchman says: "A friend is troubled with a large number of ground moles, which infest his fields, producing more destruction to his corn, both before and after making its appearance above the ground," and calls for a remedy or preventive for their ravages.

The mole is a much slandered and abused little animal, for, instead of being the thief and marauder it is represented, it is really incapable of performing such mischief. Nature has not endowed it with the capacity. It has no grinders, and cannot masticate corn. Its food is the worm and grub, and we venture to say, if the friend of the Watchman destroys the mole, his cornfield will suffer more than ever before. The mole burrows through the ground, and the field mice and rats follow in his tracks, and consume whatever suits their voracious appetites. Let the gentleman who complains of moles get some ratsbane, and exterminate these vermin, and assist the moles to destroy the grubs, and he will no longer complain of their eating his corn.

Should any one be sceptical upon this subject, let him catch a mole and examine his teeth, and then he will be satisfied that he must look elsewhere for his enemy.

A Curious Lake.

The Placerville (Cal.) American gives an account of a peculiar lake on the east side of Bear River Valley. It is an immense pool or spring, than a lake, a little over one hundred yards in length along the the base of the mountain, and nearly the same in width, but extending in one place under a shelving rock that nearly touches the surface of the water for many yards. That is an immense spring issuing from the mountain, is apparent from the fact that any floating substance thrown under the shelving rock, is immediately brought outward to the opposite bank. There is no visible outlet to the waters except that the margin is little else than rock with innumerable fissures traversing it in every direction, and through which, though with no apparent current at the surface, the water undoubtedly escapes.

The surface of the rocks at the edge of the water, and for several inches above and below, is coated thick with a substance closely resembling sulphur, but without its properties, being uniuflammable. No living fish is to be seen in its waters, but digging into and breaking up a kind of soft scoria or volcanic mud nearly hardened into stone, that makes a portion of the bank, great numbers of fish, from two to six inches in length are found embedded therein, and perfectly petrified.

Vinegar Animal.—Huc, in his travels in China, gives a curious account of the "Vinegar Animal," a polypus found in the Yellow Sea, which is placed in a large vessel filled with fresh water, to which a few glasses of spirits are added; and after twenty or thirty days this liquid is transformed into excellent vinegar as clear as spring water, very strong and of an agreeble taste. Additions of pure water without any spirit, are all that is necessary to insure a perpetual supply. Like other polypi, it propagates from a detached limb. The formid acid of ants and the exudations of the slimy grub which feed on our pear leaves, contain vinegar.

THE CAROLINA CULTIVATOR.

RALEIGH, AUGUST, 1856.

The North Carolina Railroad.

The annual meeeting of the stockholders of this road was held in this city on the 10th and 11th ult. About eight thousand shares was represented either in person or by proxy.—The discussions were generally marked by good feeling, and from present appearances this great enterprize of the State fulfils the brightest expectations of its friends. From the report of the president it appears that during the year just closed the total receipts of the road from all sources amount to $230,301, and the total expense of operating on the road amounts to $108,209, leaving for the nett earnings of the road $122,092. In order that the road may pay a dividend of six per cent., it is necessary that it shall make clear of all expenses, the sum of two hundred and sixty one thousand dollars. It is not at all probable that it will be able to reach that sum during the coming year, but we have no doubt that a large increase on the earnings of the past year may be expected. For it must be remembered that the whole road has been in operation only about six months. With an economical management of the affairs of the road we think it must ultimately prove a good investment to the stockholders. To the State herself who owns three fourths of the stock, it cannot fail to yield a good dividend, for the increase in the value of taxable property on the immediate line of the road will go far towards remunerating the State for the capital she has invested. If the whole of the State's interest, after due notice being given, were sold for what it would bring in the market, we believe the State would gain by having had the road built. The increase in the value of taxable property being more than an equivalent for any depreciation in the value of the stock. But we would not advocate an immediate sale of the State's interest in the road, for the reason that the road has not been in operation for a time sufficiently long to show what is the real value of shares.

The number of stockholders present at this meeting was, we believe, larger than at any preceding one since the organization of the company. With the present rule there will probably be little difficulty in having a full attendance every year. A "free ride" is considered by those owning a small number of shares as a pretty fair dividend, so that their interest will always be well represented at the annual meetings. Those largely interested will go without any special inducements.

The western or rather middle part of the State was most largely represented, as well it might be. For the people of that section have a three fold interest in the road: *first*, and quite largely as stockholders; *second*, as tax payers, and *lastly*, as farmers and merchants to whom the road affords the means of selling their produce in the markets of the world. And while they are thus interested in the road, it in turn is greatly dependent upon them. Almost the entire freighting business comes from that section. So that this is eminently the people's road, and they will see to it that all its concerns are managed in strict accordance with the interests of the people. We hope the day is not far distant when every section of the State shall be as well provided with the means of travel and commerce as is the tier of counties through which this road passes.

In view of the large amount of corn, wheat, &c., produced in the counties bordering on the upper part of the road a resolution was passed recommending to the directory a reduction of freight on such articles. It is well known that in the counties of Rowan, Cabarrus, Davidson and Davie and in parts of the neighboring counties, large quantities of indian corn are produced which never reach a market on account of the heavy cost of getting it to tide-water at the present freight rates. A reduction of a few cents in the bushel would make a great difference in the quantity of this staple which would pass over the road, especially at a time like the present when the market price

of it is low. The railroad is certainly able to compete with any mode of conveyance which is practicable, and the rates of freight should be so adjusted that farmers shall be obliged by the strong and legitimate motive of their own interest to seek an outlet for their produce over the railroad. From an examination of the actual cost of transportation on different roads, Dr. Holt of Davidson believed that freight could be carried and pay a small profit to the company, at the rate of three cents per ton per mile. At that rate corn would bear transportation even at present prices. As the arrangement now is much of the corn from the counties lying along the upper part of the road is kept for the rats to eat, or made into whiskey. The correct policy of the company, we believe, will be to put all the charges as low as possible, and rely upon the increase of business which will follow for making the road profitable. As far as we have heard the opinion of the Directory, they seem desirous of giving this plan a fair trial. It is not to be supposed that they should at once have fallen upon the best rate of freight for every article in the outset. There is no doubt that the business of the road may be increased to almost any extent. For the entire trade of the most productive part of the State must pass over this road, unless by mistaken policy on the part of the management of the company it is forced to seek other and less convenient channels.

The subject which drew forth more discussion than any other was that of the location of the work shops, and the policy which should prevail in carrying them on. As it is now a fixed fact that the shops shall be at or near the centre of the road, it is useless to argue the question whether or not the place for them was well selected. But there is another question which we conceive to be altogether proper for discussion, and which is of very great importance to the interests of the stockholders. As was stated at the meeting the Railroad Company own the land immediately around the shops to the amount of about six hundred and forty acres. It was the design of a majority of the Directors at the time when the land was purchased that it should not be sold to any one. The carrying on of the shops would of course require the presence of a large force of officers and mechanics of different grades. They must have dwellings and boarding houses, and as no one could procure land on which to build his own house, it follows as a matter of course that houses must be provided at the expense of the Railroad Company. These to be afterwards rented to those who should occupy them.

The other plan, which seems to have been preferred by some of the Directors, was that the land immediately around the shops should be laid off into lots and sold, so that any person who might desire to do so, might have an opportunity to build either dwellings, hotels, stores or whatever structures the requirements of civilized society demand. It was claimed that by pursuing this plan a flourishing village would soon grow up around the shops, and that the Railroad Company would thus be relieved from the necessity of spending large sums of money in providing houses, &c., for all in their employ. The plan of those who advocate the exclusive policy is to build up what they call a mechanical village, no one being permitted to reside there except those directly dependent upon the road. Those who oppose this plan desire that all interested may have a chance to build up a village or town just as may be required by the wants of the community. On the first plan every thing would be managed on Company account. All the buildings of whatsoever kind must be built by the Company. On the other plan the Company would place itself in nearly the same position in regard to the village as others interested in property there. As the road and shops would be the soul, so to speak, of the town, of course its interest would exert a controlling power over other interests. The Company would still erect such buildings as private enterprise might not be induced to take in hand.

We have not time at present to go into an argument of this question for one side or the other.

The stockholders showed a decided approval of the management of the road during the past year by re-electing all the Directors of last year.

☞ The absence of the publisher, it is hoped, will be taken as an excuse by our readers for all the inaccuracies in this No. of the Cultivator.

☞ We call the attention of the public to the advertisement of Wilson W. Whitaker, Esq., to be found in our advertising columns, and we most earnestly urge the importance of the introduction of the Suffolk hogs among the farmers generally; for by skilful breeding, this stock is made to surpass all others in the accumulation of fat, and can be made into good pork in half the time required for the native stock. Their ready disposition to fatten, and the early age at which they mature peculiarly fits them for crossing with the native stock. We could name gentlemen, extensive farmers in this State, that have made this cross and are highly pleased therewith. Besides, as the old method of raising hogs in the woods (by reason of our dense population) has become insufficient, a new policy and a new breed of hogs adapted thereto, must be inaugurated, or North Carolina must continue her large importations of pork and bacon. Then before necessity drives you, why not fall into the method of raising hogs in the field? Feed on green crops of clover, oats, rye, cymblens, peas, pumpkins and potatoes, with now and then a sprinkle of salt, sulpher and ashes—adding a little corn meal before slaughtering to solidify the flesh and you will have good cheap pork and a plenty of it. We make these suggestions because we know farmers, who having failed under the old system to make a sufficiency of pork, by practising in accordance with the above suggestions, have not only made enough, for their own consumption, but have had a surplus to dispose of in market.

Fish with Legs.—The Rochester (N. Y.) Union states that Dr. Langworth, of that city, has obtained specimens of fish with four legs from a stream of water near Fort Defiance, in New Mexico. They are about seven inches long, and resemble a young codfish; the legs are like those of an alligator. They have been sent to Professor Agassiz, at Cambridge, Mass.

Pickles.—An excellent way to make pickles that will keep a year or more, is to drop them into boiling water, but not boil them; let them stay in ten minutes, wipe them dry, and drop into cold spiced vinegar, and they will not need to be put into salt and water, and are always ready for use.

Miscellaneous.

Brick Machines.

The following description of a newly patented machine for making bricks, is from the last number of the London (England) *Mining and Railway Journal*. If the statements in regard to this machine are correct—and we see no reason for doubting them—we should suppose it to be invaluable, and the thing just needed in this country:

Clayton's Patent Brick Machine.—We have been much gratified by an inspection of this important machine, which has been in operation, worked by steam power, during the past week, at the manufactory, Atlas Works, Upper Park-place, Dorset-square, and fairly may we entitle it the most successful in all parts and results of any that yet has been accomplished. Our readers may remember our having noticed this machine at its first introduction, since which Mr. Clayton has devoted continual attention to perfect the mechanical details, and accomplish the production of quantity with still greater accuracy and facility than he had hitherto done; and it is to the extraordinary improvements thus effected in this machine that we now desire to call the especial attention of those interested in the manufacture of bricks. The most effectual and simple manner of explaining the change and improvements we think will be by comparing the present with the previous mechanical arrangements and results. 1. The machinery giving motion to the pugging and delivery means is now *distinct*, though as hitherto the operation is simultaneous, and effected by the one machine, which admits of any degree of speed being given to any portion of the machinery and consequently, the quantity of bricks that may be produced per day (by the change of the speed) is *ad limitum*. 2. The delivery is *compulsory*, and positive to the extent of from 20,000 to 30,000 bricks per day (according to their size), and the result of quantity is not diminished by the clay being used stiff, or with less moisture; consequently the quality of the brick is much better, and available for stocking in walls direct; and, therefore, much less time is required to dry them. 3. The streams of clay *are stationary while being cut into the desire*

ize of bricks, as the delivery is arranged to be ontinuously altornate from each end of the ma hine. This has wholly overcome the objection ade by many persons to the increasing delivery nd cutting the clay while in motion, and ren ers quite unnecessary the use of the complica on of self-acting cutting apparatus (employed n some machines to overcome this objection.) . The gearing is arranged for fixing on the round, instead of being above, which has ren ered the machine independent of fixings to a uilding. These excellent mechanical arrange ents, in addition to his previous clever inven on of the "rotary orifice" die, has, in our pinion, realized all that can practically or r a onably be desired; for we witnessed the ac mplishment of the large quantity mentioned, an excellent quality of bricks, with strength nd simplicity of machinery, combined with fa lity and economy of manufacture, that have so ng been the objects to be attained in one ma ine. The peculiar arrangement of the present proved machine is the forming of a chamber ithin the cylinder of the machine, and suita e machinery adapted thereto, to discharge the ay alternately through the dies at each end, hich gives ample time for cutting the streams hile in the state of rest, and for the delivery the bricks. The machine we saw in opera on, requiring a four horse power steam engine, as making six strokes per minute, delivering ght bricks at each stroke, which gives 48 icks per minute, or at the rate of 28,800 bricks r ten hours' working. The cost of the ma ine, with its gearing complete, 135*l*. Mr. ayton pointed out to us a smaller machine, the cost of 100*l*., adapted for working by one rse. In addition to the numerous prizes re ived by Mr. Clayton for the great superiority his brick and tile-making machines, the gold edal of honor was awarded to him at the ris Exhibition; and if any evidence were re ired to prove that these awards were well erited, it is to be found in the numerous testi onials in the possession of the patentee, which e have seen, received from men of business d practical experience at home and abroad, ho have tried the capabilities of the machine.

CUTTING TIMBER.—If oak, hickory or ches t timber is felled in the eighth month—Au st—in the second running of the sap, and rked, quite a large tree will season perfectly, and even the twigs will remain sound for years; whereas, that cut in winter, and remaining till next fall—as thick as one's wrist—will be sap rotten, and will be almost useless for any purpose. The body of the oak split into rails will last more than ten or twelve years. Hickory cut in that month is not subject to be worm-eaten, and will last a long time for fencing.

When I commenced farming in 1820, it was the practice to cut timber for post fencing in the winter. White oak posts and black oak rails cut at that time, I found would not last more than ten or twelve years. In the year 1828, I commenced cutting fence timber in the eighth month. Many of the oak rails cut that year are yet sound as well as those formed of chesnut. If the bark is not taken off this month, however, it will peel off itself the second or third year, and leave the sap perfectly sound. The posts of the trees are also more valuable for fuel than when cut in winter or spring.

I advise young farmers to try the experiment for themselves; and if the post fences will not last twice as long, I forfeit all my experience as worthless.—*Exchange.*

From the Rome Courier.

A short Chapter on Keeping Sweet Potatoes.

MR. EDITOR:—There being nearly a total failure, of the keeping the valuable esculent heading this article, this season, by cold weather; I am requested by a friend in your vicinity to give you for publication, the modus operandi, of my keeping.

I have now orders from all quarters, to send sweet potatoes and yams, for seed; offering any price I should please to ask, from one to five dollars a bushel.

If our good people would take the *Southern Cultivator*, or some other good agricultural paper, and read it, and remembering what they read would see, what I have said on this subject, years ago not only what has been said on keeping sweet potatoes, but they can get the combined and condensed views of others on many such useful matters by practicing which, they would save *ten times* over, the price of these useful journals. Then as the last season has fairly tested, my plan over all others; as mine remained safe and sound. I suppose, I

had not a doz n roots rotted, while all others, I can hear from, have rotted or badly injured by the cold; therefore at a special call, for my simple plan, here it is—Take out of the ground not too soon after the frost kills the vines; and don't wait too long, so as to get them frost bitten. Dig in dry weather; have some *out-house;* some garret or some such house, not fit for any thing else, it makes no odds if it is a little open, if dry. Have a good strong plank floor, laid close, sprinkle a bed of cotton seed, a few inches thick; on this put your potatoes, piled up, as much as possible, without rolling down. Let them lay here and dry a few days then cover the whole over with the same, (cotton seed) some eight or ten inches, and your potatoes will keep sound all the winter. How much more convenient and safe this plan. When you want to get to your *eating roots*, go to them carefully; open the seed; take out what you want, and put the seed back and all will be safe.

When you first cover leave no *air holes*, as some think they ought to have, you want to exclude the air entirely from them.

If this be of any service, it is at your command.

JOHN CUNNINGHAM.

Greensboro', Ga., March 24th, 1856.

N. B. The roof slope of an out building, even so low you can but stand up in the centre will do, and you can make your pile the same shape as the roofing, and if it is 40 or 50 feet all the same, if you have the potatoes put in a long, continuous pile. Or if you have room in your gin-house, on any floor, very good, put them here but avoid putting in *basement* or *damp low rooms*, where most people seek to keep them. J. C.

Haying and Hoeing.

Farmers are now busy in these employments, and it is important that they porsue the right course. Good scythes are absolotely necessary to success, and good grinding is as important. Young men should learn how to grind a scythe. They are much disposed to put off this important operation to old men who need glasses to see when the scythe is brought to an edge.

Why should not young men of sixteen be taught how to grind tools of all discriptions?—They may as well learn at that age how to grind a scythe as at the age of fifty, when most people need glasses to see how to grind.

Young men often have much fancy in preparing edge tools. They want their scythes ground as thin as a razor, when much of the grass is more stout than a man's beard. They hold the back of the scythe as close to the grindstone as they do to the edge, and in this way the best scythe is ground up in a single season. At the same time they often neglect to bring the scythe to an edge. Strange as it may seem, the back is ground down more than the front, in the hope of making a fine edge—a thin and wire edge.

We advise all young mowers to see to the grinding of their own scythes. Why not learn now while you need no spectacles to aid you? A whetstone, also, will be needed in a hayfield. Have *one*, at least, which has some grit to it and which will bring the scythe to an edge again after a batter against a stone.

You may be a hondred rods from home when you batter against a stone. Now be not so absord as to claim a right to go up to the grindstone to mend a little batter—taking up with you another man to turn the stone. You may thus cheat your employer out of an hour's labor in the best part of the day.

No! take enoogh means with you into the hay-field to save running home whenever a batter occurs, or a wedge is wanted. Your wagons in hay-time are too high to admit of much traveling from the field to the house when the weather is good.

In dull weather stir the ground among the corn, potatoes, and beans

There is always something to be done in the summer season. When it rains, let all the scattering manure under the barn be cleared out and mixed with earth for autumn use. Let all parts of the cellar be made perfectly clean, that in case you must keep milk there, it may not mould before the time of skimming.

A WHOLESOME DRINK.—The excessive use of cold water during the sweltering heat of summer, often results in serious and alarming sickness. It is therefore advisable that some beverage should be substituted for it, of which those oppressed with thirst, can partake with safety. For this purpose I am aware of no better or more refreshing drink than the following: Take of the best white Jamaica ginger root, careful

bruised, two ounces; cream of tartar, one ounce; water, six quarts, to be boiled for above five minutes, then strained; to the strained liquor add 1 lb. of white sugar, and again place it over the fire; keep it well stirred till the sugar is perfectly dissolved, and then pour it into an earthen vessel, into which you have previously put two drachms of tartaric acid, and the rind of one lemon, and let it remain till the heat is reduced to a lukewarm temperature; then add a table spoonful of yeast, stirring them well together, and bottle for use. The corks must be well secured. The drink will be in high perfection in four or five days. This is a very refreshing and wholesome beverage, and one which may be largely partaken of without any unpleasant results even in the hottest weather. Those who make use of old cider, will find this much superior as a common field beverage.—*Germantown Telegraph.*

Garden Seed.

There is a matter to which I wish to call the attention to the public, and especially that portion of it who deal in garden seeds; and that is, the bad quality of many of the kinds that they send round among us. At five cents a paper, which, on an average contains each not more than a table spoonful, they can well afford to furnish us with the very best of new seeds, imbued with full and active vitality. But I am sure some do not, and I hazard the remark that none take the pains they ought to take. The loss of 5, 10 or 15 cents is not much; but that is by no means the whole loss. There is the loss of the labor of prepairing the ground, of sowing the seed, of much of the manure used, and of the expected crop. And here is the vexation, which, in this world, which is so full of vexations, ought not to be inflicted upon us, if seed-sellers can well help it. The complaint does not proceed from one only, but from many.

There is hardly any seed which does not lose a portion of its vitality; some lose all if kept over more than one winter. It is pretty well known that seed-sellers take back in the fall the seed unsold in the preceding spring, and the suspicion is rife among us that the seed taken back is offered again, and perhaps a third or fourth time. The papers bear no date of the year when the seed was raised; and why do they not?

I fear the seed-sellers do not take sufficient care to put up only the best seed. In all cases, where the plant is biennial, they should use none but large healthy root; and when it is umbeiferous, like the parsnip, or branching, like the beet, they should put up none but such as is borne one the central umbels and the principal branches. If they were to remove the inferior umbels, (the umbels only,) and the tops of the inferior branches, at the time of blossoming, or before, the umbels and branches left would bear better seed; and those removed, would probably, if left, have borne only abortive seeds.

It has been said that cabbage seed, raised from cabbage *stalks*, the head being removed, seldom produce plants that head well. So reason teaches.

And it has been said also that squash and pumpkin seeds, taken from the stem end, are more apt to produce fruit similar to the parent than those taken from the blossom end. It is well worth while to ascertain if this saying is correct. Reflection would probably suggest a reason why it is so.

This spring, more complaint has been made of the bad quality of parsnip and onion seeds than of any other; but the beet beds show many vacancies.

Doubtless the failure of many seeds is due to the ignorance or carelessness of the sower. It will take but a few lines to remark that, in a dry season, covering the seed sown, for three or four days, with a board or a piece of old carpet, will sometimes cause it to vegetate, when otherwise it might not.

Can you, Mr. Editor, give a list of the seeds which lose their vitality soonest, and of other seeds which retain their vitality longest?—Honest seed-raisers, and all are honest, for aught I know, would be glad to learn.

Yours, &c., S. Hale.

Keene, N. H.

We fully agree with our correspondent, that there is great need in improvement in the quality of garden seeds. We have long been aware that if there is anything in which the public are humbugged, it is in garden seeds. But the cause must not be laid to the established seed dealers; it belongs wholly and exclusively to the purchasers. They require cheap seed, and always buy of those who sell the lowest, and

of course, they get them; for no honest, upright seedsman could supply pure fresh seeds at the unsually low prices at which they are now sold.

The truth is, the mass of the people buy garden seeds as they would a pound of sugar or a bushel of corn; the cheapest always finding the most customers. The standing of the seeds man is no consideration, and the seeds of an unknown dealer are just as readily taken as those from the merchant who is well kuown, and has a reputation to losc. The competition among dealers, and the eagerness to secure customers, has lowered prices, as they arc below what fresh seeds can be raised for, they must of course be adulterated to afford a living. The dishonest seedsman, if there are any such, must pursue this course, or purchase, hap-hazard, any seed offered for sale, of which there is always abundance, without knowing anything about them. Probably not one in ten of those who buy seeds are aware that the best seedsmen, who can be relied upon, have their seeds raised expressly for them, and often furnish the stock, or know that it is pure; it is the only way they can be certain of their genuineness. The only remedy is, therefore, to deal with *first rate* houses, with men who are known, and to be willing to pay a fair price for a pure article. If, however, they must be had at a low price, purchasers must expect to have them mixed with old seeds; for it is the only way in which the dealer can compete with the cheap seedsman. Our advice is, to buy nothing in the way of seeds, plants or trees, because they are cheap.—*Hovey's Magazine.*

Suggestions for the Gardener.

Squashes.—There are few vegetables cultivated on the farm more valuable or more universally admired than the squash. The soil best adapted to the cultivation of this vegetable is a light sandy loam, but it may be grown on almot every kind of soil, from the heaviest and most tenacious clays, to the lightest sands, if properly manured. It is much like the pumpkin in this particular, though it does not possess the same degree of hardness, and requires more careful nurture under circumstances uncongenial to its nature, especially when young. You may grow good squashes on pasture land, of a salubrious texture, by manuring with strong compost formed of clay, putrescent manure and ashes, thoroughly incorporated, and placed in the hills and giving the plants an occasional dressing of lime, gypsum, and soo . Hoe often and keep down the weeds. When the vines commence fruiting, remuve all superfluous blossoms, and shorten the runners; this will increase the energy of the plants and secure arge and well developed fruit. The squash may be dried the same as the pumpkin, and applied to the same uses.

Soap Suds.—Save all the suds from the sink and the laundry. If you do not want it for purposes of irrigation, let it be conveyed to your manure heaps, or mixed with materials for compost. No article of a liquid nature possesses more powerful alimentary properties, and its economization will be found a source of considerable profit to any one who will properly use it. It contains the food of plants in a state of solution, and therefore is prepared to act at once and with energy. By mixing it with sods, chip manure, muck, refuse straw, green vegetable matter, or indeed, any kind of decomposed rubbish, and allowing the whole to ferment slowly, a most excellent fertilizer for Indian corn may be prepared, and one that will bring forward the crop with greater vigor than almost any other article that can be named. It is also very valuable as a manure for culmiterous vegetables—melons, squashes, cucumbers &c.

Urine.—Prepare a system of spouts and reservoirs in your barns and outhouses for the preservation of the liquid voidings of your domestic animals of all kinds. This is an article of great efficiency in promoting the growth of plants.—If allowed to stand till it becomes putrid, its effects re more immediate than that of any other stimulant, not even excepting soap suds. When applied to plants it tends to preserve them from he attacks of insects, and also at the same time, imparts new energy to the circulatory and assimilating system. No article is more durable for irrigating gardens. It should be saved in large quantities.—*Germantown Telegraph.*

Manuring Orchards. When orchards bear profusely. or the soil through which their roots extend, yields crops which are removed from the ground, the trees ought to be supplied with an ample dressing of manure, as often at least, as once in four or five years.

If you think you will not make corn enough prepare to raise turnips for your stock.

From the American Cotton Planter.

For Botts and Cholic in Horses.

Take of *warm weak ley* a chunk bottle full, with which drench the horse. Repeat the dose at intervals of fifteen minutes, until three doses are given, when, if relief is not obtained, the case is hopeless, are the directions given me when the remedy was communicated. I have tried it in more than twenty cases of all stages of *cholic*, and in several cases supposed to be *botts*, and in every instance the horse was up and eating in ten minutes. My practice, when there is no ley convenient, is to put some ashes and water into an oven, and place it on the fire until it boils, when it will be strong enough for use. Salæratus or soda, I presume, would do as well.

The simplicity, rapidity and certainty of this remedy surpasses any thing I have ever tried. It is also rational; an alkalic neutralizes the acids of the stomach, and is one of the few things that will kill the bott—decomposing it very rapidly. Would the same remedy not be good for that fatal disease among horses, known as "Blind Staggers." I have not had an opportunity of trying it, but as that disease must arise from some derangement of the stomach, an alkalie might give relief. A. C. M.

To Make Paper Macha.—This is a substance made of cuttings of white or brown paper, and beaten in a mortar till they are reduced into a kind of paste, and then boiled with a solution of gum arabic, or of size, to give tenacity to the paste, which is formed into different toys, &c., by pressing it into oiled moulds. When dry, it is done over with a mixture of size and lamp-blaek, and afterwards varnished. The black varnish for these toys is prepared as follows: Some colophony, or turpentine, boiled down till it becomes black and friable, is melted in a glazed earth vessel, and thrice as much amber in fine powder sprinkled in by degrees, with the addition of a little spirit or oil of turpentine now and then; when the amber is melted, sprinkle in the same quantity of sarcocalla, continuing to stir them, and to add more spirit of turpentine, till the whole becomes fluid; then strain out the clear through a coarse hair-bag, pressing it gently between hot boards. This varnish, mixed with ivory-black in fine powder is applied in a hot room, on dried paper paste; which is then set in a gently heated oven, and the third day in a very hot one, and let stand each time till the oven grows cold. The paste thus varnished is hard, durable, glossy, and bears liquors hot or cold.

A Certain and Speedy Cure for Dysentery.

I send below a recipe for the cure of common dysentery, which you can publish or omit as fancy lead you. I will only remark that I have repeatedly given it to my negroes and have never failed to effect a cure, however violent, in 24 to 36 hours, and what is more I never expect to fail.

Receipe:—For a grown person give a good dose of salts combined with 15 drops of laudanum. During its operation give no other nourishment but an occasional cup of gruel. So soon as the bowels have been well operated on, which will be in the course of a few hours, give a teaspoon full (even full) of table salt, dissolved in two table spoon-fulls of vinegar, and in three cases out of four the patient is *cured*. If, however, there are symptoms of return the next day, repeat the practice and the trouble is ended. H. H.

Charcoal and Salt for Hogs.—One of the best articles that can be given to swine, while confined, is charcoal, pulverised, and common salt. Salt and sulphur are very good articles, and should he constantly supplied.—We would not, however, be understood as urging the necessity of keeping these articles continually by them, or introducing them daily into their food. The first is necessary to obviate the bad tendency of certain kinds of aliment and should be supplied in quantities varying from one pint to two quarts, as often as once or twice a week. Salt should always be introduced as a seasoning in food. When it is not so used, it should be given twice a week, or it may be placed in a box in the stye to which the animals can have access whenever they wish to partake.—*Germantown Telegraph.*

Evil Company.—Sophronious, a wise teacher of the people, did not allow his sons and daughters, even when they were grown up, to associate with persons whose lives were not moral and pure.

"Father," said the gentle Eulalia one day when he had refused to permit her to go in company with her brother to visit the frivolous Lucinda—"Father, you must think that we are very weak and childish, since you are afraid that it would be dangerous to us in visiting Lucinda."

Without saying a word, the father took a coal from the hearth, and handed it to his daughter. "It will not burn you, my child," said he; "only take it."

Eulalia took the coal, and behold, her tender white hand was black, and, without thinking, she touched her white dress, and it also blackened.

"See," said Eulalia, somewhat displeased, as she looked at her hands and dress, "one cannot be careful enough when handling coals."

"Yes, truly," said her father. "You see, my child, that the coal, even though it *did not burn you*, has nevertheless, *blacked you*. So is the company of immoral persons."

Domestic Hints.

Buckwheat Porridge.—Take a quart of rich milk, and after boiling it hard, stir in as much buckwheat meal as will make it of the consistency of thick mush, adding one teaspoonful of salt and a tablespoonful of fresh butter. In five minutes after it is thick enough to take from the fire. If the milk is boiling hard and continues to boil while the meal is being stirred in, very little more cooking will be required.—It should be placed on the table *hot*, and eaten with butter and sugar, or with molasses and butter. This is sometimes called a five minute pudding; it is excellent for children as a plain dessert, or for supper. Some add a seasoning of ginger or grated nutmeg before sending it to the table.

—

Indian Muffins.—A pint and a half of yellow Indian meal sifted. A handful of wheat flour. A quarter of a pound of fresh butter. A quart of milk. Four fresh eggs. A very small teaspoonful of salt. Put the milk into a saucepan. Cut the butter into it. Set it over the fire and warm it until the butter is very soft, but not until it melts. Then take it off, stir it well till all is mixed, and set it away to cool. Beat four eggs very light; and when the milk is cold, stir them into it alternately with the meal, a little at a time of each. Add the salt. Beat the whole very hard after it is all mixed. Then butter some muffin-rings on the inside. Set them in a hot oven, or on a heated griddle; pour some of the batter into each; and bake the muffins well. Send them hot to table, continuing to bake while a fresh supply is wanted. Pull them open with your fingers, and eat them with butter, to which you may add molasses or honey.

—

How to Make No-Matters.—This is an article of food which has for many years been confined to the descendants of a single family of this town. Its excellence will commend it to the attention of those housewives who wish to make a good display of culinary skill upon their tables, at the same time having a due regard to economy. The lady who furnishes the recipe has given frequent opportunities of tasting the delicious flavor; and if any are inquisitive, perhaps she might be induced to inform them how the cakes obtained their homely name.

"To three tea-cupfuls of buttermilk add three table-spoonfuls of rich cream, and a small quantity of sugar. Stir in flour until it is of a consistency of paste for doughnuts. Roll out size of a large breakfast plate, and fry in lard to a rich brown color.

"As each cake comes from the fire, cover with apple-sauce made from tart apples sweetened to taste, and spiced with nutmeg or cinnamon, and continue the process till the plate is well heaped."—*Oxford Democrat.*

—

Nursery Pudding.—Slice some white bread, without crust; pour scalding milk on it; let it stand until well soaked, then beat it well with four eggs, a little sugar and grated nutmeg.—Bake in small cups half filled.

—

Use of Salt in Cooking Vegetables.—Here is something everybody ought to have known long ago, and that everybody should now read and remember:

"If one portion of vegetables be boiled in pure distilled or rain water, and another in water to which a little salt has been added, a decided difference is perceptible in the tenderness of the two. Vegetables boiled in pure water are vastly inferior. This inferiority may go so far, in the case of onions, that they are almost entirely destitute of either taste or color,

though when cooked in salted water, in addition to the pleasant salt taste, a peculiar sweetness and a strong aroma. They also contain more soluble matter then when cooked in pure water. Water which contains 1-420th of its weight of salt is far better for cooking vegetables than pure water, because the salt hinders the solution and evaporation of the soluble and flavoring principles of the vegetables.—*Scientific American.*

—

How to Cook Rhubarb.—It is a common error in cookin rhubarb to peel it. This should never be done as the skin contains the aroma of the plant and is not at all fibrous but cooks up readily and becoms pulpy. We have derived this information from a French cook of noted experience and skill. The same cook tells us that asparagus should be cut into pieces about three quarters of an inch long before cooking. It should be boiled with a nice piece of salt pork and served up in the same manner as peas.

—

To Extract Grease from Cloth.—The following is infallible: "To sixteen ounces of rectified spirits of wine add ten grains of carbonate of potash, (pure,) half an ounce of essential oil of bergamot, and one ounce of sulphuric ether; mix and keep in a glass stoppered bottle. Apply with a piece of sponge, soaking the cloth thoroughly when the grease is not recent. The mixture emits a peculiarly fragrant odor, and being a fluid soap, chemically composed, will be found a perfect solvent of oily matter."—*Exchange.*

The above is a good receipe for the purpose stated; of this we judge of the nature of the substances of which it is composed. A cheaper fluid for the same purpose, and one that will answer equally as well, is made of an ounce of liquid ammonia, and four ounces of alcohol, mixed with an equal quantity of water.—*Scientific American.*

—

How to Wash Flannel.—Some washer women possess quite a *knack* in washing flannels, so as to prevent it from fulling. It is not the soapsuds, nor rinsing waters that thickens up flannel in washing, but the *rubbing* of it. Cloth is fulled by being "pounced and jounced" in the stocks of the fulling-mill with soapsuds. The action of rubing flannel on the wash board is just the same as that of the fulling-mill. Flannel, therefore, should always be washed in very strong soapsuds, which will remove the dirt and grease, by squeezing, better than hard rubbing will in weak soapsuds. It should also be rinsed out of the soap in warm water, and never in cold, as the fibres of the wool do not shrink up as much in warm water after coming out of the warm soapsuds. Great care should be taken to rinse the soap completely out of the flannel. This advice will apply to the washing of blankets, the same as it does to the washing of flannel.—*Scientific American.*

—

Liniment.—The following recipe, it is said, is the best ever used for sprains, lameness, &c. of man or beast. Its constituents are certainly of the right kind, and the compound undoubtedly excellent: 3 oz. oil origanum, 4 oz. aqua ammonia, 2 oz. tincture of opium, 1-2 pint spirits of campor; alcohol enough to fill a quart bottle. The liniment should be well rubbed in when applied.

—

Fly Poison without Arsenic.—The following preparation is much used in Europe for the destruction of flies: Quassia, eight parts; water, five hundred parts; molasses, one hundred and twenty-five parts. Boil the qoassia and water ten minutes; strain and add the molasses. The preparation can easily be made by any one.—Flies are attracted by this and soon killed.

New York Working Farmer.

—

Peach Worm.—Boiling water, says the *Horticulturist*, is a most excellent application in the spring of the year, for diseased and feeble peach tree and is a certain remedy for the peach worm. A correspondent very effectually excluded the peach worm by digging a basin around the foot of the trunk, forming a cavity a foot in width and four inches deep, and then pouring into this basin very thick whitewash, made of fresh lime, and suffered to stand one day before applying.

A good Comparison.

The Rev. William Roulatt, a well-known Methodist clergyman, residing at Naples, draws the following amusing but apt comparison between Dr. McLane's celebrated Vermifuge and a ferret: "A ferret when placed at the en-

trance of a rat-hole, enters the aperture, travels along the passage, seizes upon the rat, exterminates his existence, and draws the animal's defunct carcass to the light. And in like manner have I found *Dr. McLane's American Vermifuge* to operate upon worms, those dreadful and dangerous tormentors of children. This remedy, like the ferret, enters the aperture of the mouth, travels down the gullet, hunts round the stomach, lays hold of the worms, shakes the life out of the reptiles, sweeps clean their den, and carries their carcases clear out of the system. This, at least, has been the effect of the Vermifuge upon my children."

A neighbor of Mr. Roulatt, Mr. John Briggs, adopts the simile of the reverend certifier, thus both giving their most unequivocal approval of this great specific, after having witnessed its operation upon their own children. Let others try it, and be satisfied.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa.** All other Vermifuges in comparison are worthless Dr. M'Lane's genuine Vermifuge also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

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Dr. McLane, the inventor of the celebrated Liver Pills, used these pills for several ears in his practice, before he could be induced to offer them to the public in such a manner as to make them known throughout the country. This learned physician felt the same repugnance that all high-minded men of science feel in entering the lists against those unscrupulous empirics who obtrude their useless nostrums upon the public, and rely upon a system of puffing to sustain them. Convinced, however, of the real value of the Liver Pills, and influenced by the plain dictates of duty, the Doctor finally sacrificed his delicate feelings on the altar of public good. His great medicine has not disappointed the expectations of the medical practitioners, at whose instance he was induced to forego his inclinations.—From every quarter do we hear the most gratifying accounts of its wonderful curative effects—the East and the West, the North and the South, are alike laden with "tidings of great joy" from the afflicted. These wonderful Pills have completely conquered the great scourge of America—the Liver Complaint.

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TIME'S CHANGES.—The invonters of Steam-power, Railroads and Machinery have during this century changed the means and course of living, while the discoveries of science have done even more for the advancement of human happiness and the amelioration of human suffering. Our forefathers, when they were sick, drank their bitter drugs that did not cure, and bowed them down under diseases that are now easily broken. They tried crude roots and herbs, wich failed them. Now scientific research has discovered that the peculiar property of one root and that of another was required. It was through this light and on this principle Dr. AYER has compounded his two great remedies—Cherry Pectoral and Cathartic Pills. He has concentrated the curative virtues of our best vegetable remedies. The result shows their origin and their results are known in this community. Mark the difference to a patient in the lapse of fifty years.—Then he swallowed his bitter pill in vain: now the sick man takes his sugared Pill or honied Drop and soon is well again. These adaptations of the sciences which bear upon the security or the comforts of human life are after all the tangible points of their vantage to man. Without them it matters little how much may be discovered, or what we know since it is unavailable to our necessities and use.—*Eastern Literary Review.*

Fits! Why Prominent.

For a long time there was a paragraph making its regular weekly appearance in our columns, with the brief, but emphatic words, "Fits! Fits!" always at the head, to some an offensive caption, but not so to the benovolet and humane, who could sympathize in the sorrows of others. Some persons are shocked at any indication of disease, and are even thrown into nervous excitement on witnessing a hearse

or a coffin. Such are to be pitied. We should always strive to look disease and even death in the face with calmness, and especially take every opportunity for alleviating disease. Viewed in this light, the advertisements of S. S. Hance, of 108 Baltimore street, Baltimore, Md., possess a certain interest, and those who know of any one suffering from Epilepsy, Spasms, or Fits of any kind, should feel it a pleasure to cut out his advertisement, or in some other way send word to the afflicted of the great value of his remedies. They can be sent to any part of the country by mail. Price, $3 per box. Two, $5. Twelve, $24.

Postage on Seeds.—The charge of letter rates of postage on packages of seeds, 3 cents per half ounce, instead of book postage—a cent an ounce—or even still more moderate terms—is equally unjust and injurious to the interest of farmers. An instance of this has just come to our notice: A, in Pennsylvania, writes to B in this city to send him, for fifty cents enclosed, as much of a particular kind of corn as he can, and prepay the postage on it. The price of the corn being fifty cents a quart, B weighs this quantity and finds the postage would be as market reports say, $1,75a$2. He then tries a pint, half a pint, &c., &c., until finally, he is obliged to send eight cents worth of corn for forty-two cents worth of postage.—*Edgefield Advertiser.*

Nurseries—Are now wanted all over the United States. All the old orchards are beginning to decay or die. Apples, for a number of years, have borne perhaps double the price they did twenty years ago, when the trees were comparatively young; all kinds of dried fruit command a high price the world over.

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Sheep.—Keep in a trough, under cover, accessable to your sheep, from now until fall, tar and salt. Every few days tar should be strewn over he bottom of the trough, and salt over the tar. The sheep in eating the salt will smear their noses with the tar, and thus will they be armed with a repellant against the fly that deposits eggs in their nostrils that cause worms in the head.

Table of Contents.

A Curious Lake,..... 175
A short Chapter on Keeping Sweet Potatoes,.... 179
A wholesome drink,..... 180
A Cure for Dysentary,..... 182
Benefit of Agricultural Fairs,..... 172
Brick Machines,..... 178
Culture of Potatoes..... 168
Cider Wine—Apple Cordial,..... 176
Cotton Seed and its Uses,..... 173
Charcoal and Salt for hogs,..... 183
Domestic Hints,..... 194
Evil Company,..... 183
Foster's Cotton Seed Sower,..... 169
Food for the Sick,..... 171
Fish with Legs,..... 178
For Bots and Cholic in Horses, ... 182
Ground Moles,..... 175
Garden Seeds,..... 181
Horse Shoes and how to put them on,..... 164
Haying and Hoeing,..... 180
Juice of the Watermelon,..... 175
Medical Notices,..... 185
On Feeding Animals,..... 161
Pickles,..... 172
Remedy for the Striped Bug,..... 172
Salt and Guano,..... 166
Star and Adamantine Candles,..... 169
Suggestions for the Garderner,..... 182
Suffolk Hogs,..... 178
The Profit of Fattening Swine,..... 167
To divest Calves of vermine,..... 174
The Ocean,..... 174
The North Carolina Railroad,..... 176
To make paper machia,..... 183
Vinegar Animal,..... 175

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Did space permit, we could give many hundred certificates, from all parts where the Pills have been used, but evidence even more convincing than the experience of eminent public men is found in their effects upon trial.

These Pills, the result of long investigation and study, are offered to the public as the best and most complete which the present state of medical science can afford. They are compounded not of the drugs themselves, but of the medicinal Virtues only of Vegetable remedies, extracted by chemical process in a state of purity, and combined together in such a manner as to insure the best results. This system of composition for medicines has been found in the Cherry Pectoral and Pills both, to produce a more efficient remedy than had hitherto been obtained by any process. The reason is perfectly obvious. While by the old mode of composition, every medicine is burdened with more or less of acrimonious and injurious qualities, by this each individual virtue only that is desired for the curative effect is present. All the inert and obnoxious qualities of each substance employed are left behind, the curative virtues only being retained. Hence it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

As it is frequently expedient that my medicine should be taken under the counsel of an attending Physician, and as he could not properly judge of a remedy without knowing its composition, I have supplied the accurate Formulæ by which both my Pectoral and Pills are made to the whole body of Practitioners in the United States and British American Provinces. If, however, there should be any one who has not received them, they will be promptly forwarded by mail to his address.

Of all the Patent Medicines that are offered, how few would be taken if their composition was known. Their life consists in their mystery. I have no mysteries

The composition of my preparations is laid open to all men, and all who are competent to judge on the subject freely acknowledge their conviction of their intrinsic merits. The Cherry Pectoral was pronounced by scientific men to be a wonderful medicine before its effects were known. Many eminent Physicians have declared the same thing of my Pills, and even more confidently, and are willing to certify that their anticipations were more than realized by their effects upon trial.

They operate by their powerful influence on the internal viscera to purify the blood and stimulate it into healthy action—remove the obstructions of the stomach, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wherever they exist, such derangements as are the first origin of disease.

Being sugar wrapped they are pleasant to take, and being purely vegetable, no harm can arise from their use in any quantity.

For minute directions, see wrapper on the Box.

PREPARED BY JAMES C. AYER.

Practical and Analytical Chemist.

LOWELL, MASS.

Price 25 Cents per Box. Five Boxes for $1.

SOLD BY

P. F. Pescud and Williams & Haywood, Raleigh, N. C., May, 1856. 5—y.

RINGLETS! RINGLETS! RINGLETS!

☞ CURL YOUR HAIR. ☜

AFTER MUCH STUDY, TOIL AND EXPENSE, I have discovered the secret of making the most straight, uncouth and coarse-looking hair, either to CURL or WAVE, at the option of the individual, in the most graceful manner, for life; thus enabling persons greatly to improve their appearance. Only three applications of my preparation are necessary. The preparation, which is not only perfectly harmless to the skin and hair, but renders the latter permanently silky and glossy, does not cost more than *fifty cents*, and the materials of which it is composed can be bought anywhere. I will send the RECEIPT for making it, to any person who forwards me ONE DOLLAR, by mail, pre-paid. Address

PROFESSOR H. N. ROWLAND,

Practical and Analytical Chemist, Philada., Pa

☞ The RECEIPT and one bottle of the PREPARATION, sent free by mail, for $2. 10tf

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PATENT SWINGLETREE.

THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed, with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached to it. It is a cheap safe, and certain protection against danger. It can be attached to old or new vehicles.

☞ Notice is hereby given, that any infringement on this Patent, or any immitation, or attempt to make or use by any modification, this Patent Swingletree in any of the counties above enumerated, the person or persons so offending will be prosecuted to the full extent of the law, in the U. S. Courts at Washington.

P. P. WILLIAMS & CO.

Raleigh, Feb. 14, 1856.

DR. STRONG'S COMPOUND SANATIVE PILLS

These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints, Chills and Fever, Dyspepsia, Costiveness, Liver Complaint, Jaundice, Sick Headache, Scrofula, Salt Rheum, Fevers of all kinds, Loss of Appetite, Obstructed and painful Menstruation, and all lingering diseases.*

As a Female Medicine they act like a charm, and when taken according to the directions, they never fail to cure the worst cases of **Piles**, after all other remedies fail.

They purify the blood, equalize the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action: and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

Also

DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds, Catarrh, Bronchitis, Croup, Whooping Cough, Asthma, Consumption, Nervous Diseases, Dyspepsia, Costiveness, Erysipelas, Disease of the Heart, Inflammation and Pain in the Chest, Back and Side, and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food, in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant, Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups, Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capable of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regular Appetite, and Strengthen the System.**

Price 25 cents per box, containing 25 doses of Medicine.

Call on the Agents who sell the Pills, and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of cures.

Both kinds of the above-named Pills are for sale in

Every Town and Village in North and South Carolina.

And at Williams & Haywood, Raleigh, N. C.
May 1855. 3—

GREENSBOROUGH MUTUAL INSURANCE Company. The cost of Insurance on the Mutual plan is but a small sum, compared with a joint stock company. This company being located in the Western part of the State, consequently much the larger portion of the risks are in the West, very many of which are in the country.

The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President.*
S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney*
PETER ADAMS, *Sect. & Treasurer.*
W. H. CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf.

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assured for life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $30, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

SLAVES are insured for a term of from one to five years, for two-thirds their value.

All losses are paid within 90 days after satisfactory proof is presented.

DIRECTORS.

CHARLES E. JOHNSON,	WM. W. HOLDEN,
WM. D. HAYWOOD,	WM. D. COOKE,
JOHN G. WILLIAMS,	R. H. BATTLE,
H. W. HUSTED,	WM. H. JONES,
WM. H. MCKEE,	P. F. PESCUD'
CHARLES B. ROOT,	SEATON GALES.

OFFICERS.

DR. CHARLES E. JOHNSON, *President,*
WILLIAM D. HAYWOOD, *Vice President,*
JAMES F. JORDAN, *Secretary,*
WILLIAM H. JONES, *Treasurer,*
H. W. HUSTED, *Attorney.*

CHARLES E. JOHNSON, M. D. } *Medical*
WILLIAM H. MCKEE, M. D. } *Board of*
RICH'D. B. HAYWOOD, M. D. } *Consultation.*

R. H. BATTLE, } *Executive Com-*
W. W. HOLDEN, } *mittee.*
CHARLES B. ROOT, }

Communications should be addressed, (post paid) to
JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA
MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

OFFICERS OF THE COMPANY.

President.
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*

John R. Williams, }
T. H. Selby, } *Executive Committee.*
C. W. D. Hutchins, }

This Company has been in successful operation for more than 7 years, and continues to take risks upon all classes of property in the State, (except Steam Mills and Turpentine Distilleries,) upon favorable terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Country risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured.

The average cost of Insurance upon the plan of this Company has been less than one third of one per cent. per annum, on all grades of property embraced in its operations.

All communications in reference to insurance should be addressed to the Secretary, post paid.

J. C. PARTRIDGE, *Sec'y.*

Raleigh, June 9th, 1856.

JOHN N. GORDON,
Grocer and Commission Merchant and Dealer in Metals,
14th Street, near the Exchange Hotel,
RICHMOND, VA.

May, 1856. 3.—tf

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. Cooke, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

Executive Office,
Raleigh, Jan. 26, 1856.

Mr. William D. Cooke has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, ..r C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

Dear Sir:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, then any work of the kind, that has yet appeared.

Very Respectfully,
January 26th, 1856. WILL: A. GRAHAM.
Wm. D. Cooke, Esq.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

N. B.—The copartnership heretofore existing between W. D. Cooke and Samuel Pearce in the proprietorship of the Map has been dissolved by mutual consent.

WILEY'S NEW FORM BOOK.

A NEW AND PRACTICAL FORM BOOK, containing forms of all those Legal Instruments important to be known by the People of North Carolina and designed for the use of *Justices of the Peace, Sheriffs, Clerks, Constables, Coroners*, compiled and arranged by C. H. Wiley, Esq., to which are added the Constitutions of North Carolina and of the United States. Published by Wm. D. Cooke, Raleigh, N. C.

Any person enclosing One Dollar in a letter, or that amount in Postage Stamps, will receive by return mail a copy of the work *free of postage*. *Be very careful to send for* "Wiley's New Form Book" and address
WM. D. COOKE, Raleigh, N. C.

April, 1856.

THE NEW HOTEL,

WELDON, N. C.,

IS NOW OPEN for the reception of visitors. This Hotel is new and newly furnished, and the Proprietors will use every effort to keep a GOOD HOUSE, and render their guests comfortable.

They respectfully solicit a share of public patronage.
T. J. JARRATT & Co.
Proprietors.

MEALS always ready on the arrival of the cars.
July, 1855. 33—tf.

WHITFIELD'S HOTEL,

WELDON, N. C.,

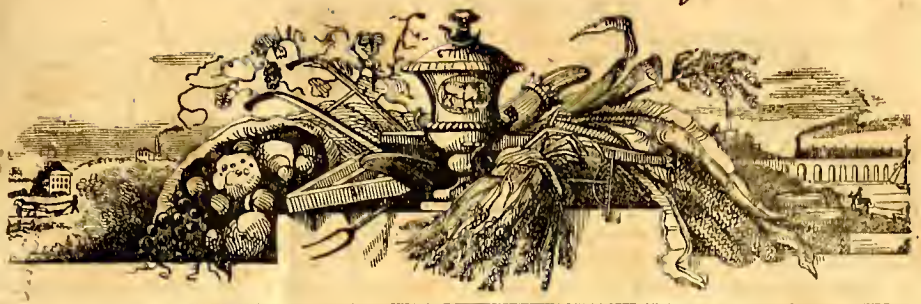
JOHN SMITH, Jr., Proprietor,

Formerly of Charleston, S. C.

MEALS, FIFTY CENTS.

Left hand side going South---Right hand side going North.
August 18, 1855, tf.

L. D. M'Dowell
Westbrooks



THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher — B. S. HEDRICK, Agricultural Editor.

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Miscellaneous.

From the Southern Cultivator.

Work for the Month–(September.)

THE PLANTATION.

Cotton, now beginning to open fully, must be gathered without delay. Avoid picking immediately after a shower, lest the lint should be dirty. See that your Gin and Press are in complete order, and send no Cotton to market that has not received the most careful handling throughout.

Cow Peas should be gathered and put away during the brief intervals of leisure from cotton picking. The vines of late planted Peas may also be cut when the pod is just forming, and cured for hay.

Winter Oats, *Rye*, *Barley*, *Clover* and *Lucerne* may be sown the latter part of this month.

Turnips for a fall crop, must now be sown, without delay. The Ruta Baga, Yellow Aberdien, Norfolk, Early Flat Dutch, Globe and Strap Leaf Red Top *Turnips* are all valuable varieties—the two first being the best for stock and long keeping.

Hay.—In addition to the Corn-stalk and unpulled fodder, Sweet Potato vines and the top of Pindars make a tolerable rough forage, if cut and cured before they begin to wither. All Crab Grass, Crowfoot and other grasses must be cut when in blossom, and carefully cured, with as little exposure to the sun as possible, to be any value for hay. The dried up and withered grass often *pulled* for hay late in the season, is almost utterly valueless.

Wet lands may now be drained, woodlands prepared for pasturage, weeds and brush grubbed up, &c., &c.

Winter Forage.—As a green crop, try Wheat, sown thick in 3 foot drills, on deeply plowed and rich land. It will give your animals green food nearly all winter, bearing repeated cuttings.

THE GARDEN.

Turnips, of all kinds if not already sown, must be put in without delay.

STRAWBERRY BEDS

May now be *prepared* and the plants set out any time during the fall or winter. A cool moist soil, rich in vegetable matter, suits this fruit best, in our sultry climate. Spade or trench-plow the ground as deeply as possible, turning under a pleutiful supply of swamp muck, decomposed leaves, wood ashes, pulverized charcoal, and a *little* well rotted stable manure. Harrow or rake the surface until it is perfectly fine and even, and set your plants in 3 foot rows.

When the plants are well rooted, cover the entire surface of the ground with partially decomposed forest leaves, only permitting the plants to be exposed. By this method, with an occasional watering in dry weather (and the proper selection of varieties) this delicious and healthy fruit may be raised adundantly during 3 or 4 months in the year, for family use and for market. It can be safely transported 300 miles per railroad, and has even been sent from Georgia to New York, in excellent condition. It is, in all respets, one of our most attraetive and profitable fruit crops, and we hope it will receive increased attention hereafter. Our six choicest varieties are, *Hovey's Seedling*, *McAvoy's Superior*, *Longworth's Prolific*, *Walker's Seedling*, *Crimson Cone*, and a nameless plant of the *Hautbois* class, common in this vicinity. *McAvoy's Extra Red*, the *Crescent Seedling*, *Black Prince*, *Iowa*, *Jenny Lind*, *Scott's Seedling*, and other varieties, are also valuable for amateurs.

THE FRUIT ORCHARD.

New land, elevated and not too rich, is most suitable for Fruit Growing, and we offer the following plan for speedily replacing a forest with a fine and productive Peach or Apple orchard: Cut off all wood and brush very clean, early in the fall, burning to ashes all the logs that you cannot remove. Then stake off your land the proper distances, and dig holes six feet across and two feet deep, throwing the surface mould on one side and the subsoil on the other. Rake into the bottom of the hole a bushel or more of the surrounding loose earth, leaves, &c.—fill up to the proper height with the surface soil first thrown out, and plant your tree carefully, heaping up the subsoil in the form of a mound about the trunk and over the roots, to allow for the natural settling of the earth. Your tree being now planted and furnished with a two year's supply of food immediately within its reach, the after-culture may be as follows: The first spring, early, plow and cross-plow the young orchard with rooters, keeping beyond the holes in which the trees are planted, and carefully avoiding all injury to the trunk or branches. Sow *Cow Peas* in drills in the open spaces between the trees, and keep the earth loose and mellow about the roots with a pronged hoe.—If *mulching* material can be obtained, apply it thickly, after the first hoeing, as far as the roots of the trees extend. This will obviate the necessity of any further working for the season. When the Peas ripen pick and save them, turning the vines under and sowing another crop, to be gathered in the same manner. These repeated plowings and cross-plowings, with the abudant supply of nutritive matter furnished by the decomposing Pea vines, will insure the most vigorous and healthy growth of the trees, and force them into early and prolific bearing. Other low crops, such as Sweet Potatoes and Pindars, may afterwards be grown profitably in the orchard, and the vines returned to the soil as above recommended. We confidently recommend a trial of this plan to those who desire the quickest and most satisfactory return for their labor in Fruit Raising, and who have no old land elevated enough, or otherwise suitable. November and December are the best months for planting trees.

Training a Balky Horse.—In India, when a horse becomes stubborn and refuses to move, instead of whipping him as is our custom, or setting fire to straw under his belly, as is sometimes practiced in England, a rope is attached to his foreleg, and one or two persons go ahead and pull at the rope. It is said this will start the most refractory horse. The Michigan Farmer says a horse became balky in Detroit a short time since, and neither whipping nor coaxing could make him stir. A rope was fastened round his neck, and he was dragged a short distance by another team, but this did not effect a cure. The rope was then taken from his neck, passed between his legs, and fastened firmly to his tail. In this manner he was drawn a short distance, and when the rope

was taken off, the hitherto unruly animal was perfectly obedient to the will of his master.—We have seen this method tried, with similar results.

From the South Carolina Agriculturist.

The uses and Preservation of Turnips.

As we promised an article on these subjects in our July No., we proceed to give our views and experience for the benefit of those who only plant this valuable crop in small quantities. We would be glad to have the idea practically adopted, that the turnip crop is indispensable, and should be largely grown on all the plantations of the South. That it would be profitable, is, to us, no matter of doubt. In England, this is the farmer's great crop; for on it he feeds his sheep, fattens his oxen, and even learns his horses, in a great measure, to live on rutabagas. If we were to adopt a turnip mania with the violence with which we see our planters take to humbugs in the staple commercial crops, we would soon see marked changes in our farm stock for the better, whilst the milk pail and butter churn would testify to the comfort and producing qualities of this root. We have grown 800 bushels of rutabagas upon an acre, and the cost of this culture did not exceed twenty dollars. As ample directions have heretofore been given for the cultivation of the crop, we will treat, at present, only of the uses which we have usually made of them, and their preservation. We feed them to all our domestic animals—horses, mules, cattle, sheep, goats, swine and poultry. For horses and mules, we simply wash the roots clean and throw them in the manger along with the corn. The horses will eat to satiety, and the best effects will follow, as to condition and appearance. Some horses will not readily eat them, but they can be trained in half a day to do so. We usually take all the food out of the manger, and, cutting the turnips into pieces, tempt the horse by putting portions into his mouth. This soon induces him to lay hold and do justice to the fare. Added to grain and fodder or hay, the turnip supplies the lack of green food in winter, and thus is particularly beneficial to very old horses and colts. We usually chop them into pieces and steam them for our milch cattle, but feed them entirely raw to those not giving milk. We regard this as more congenial to the nature of animals than to steam them, as the deficiency of green food is thus supplied in winter. Steaming banishes the turnip flavor from butter. For calves, we chop them very fine, and mix them with meal. A liberal allowance of hay, with a mess of turnips and meal, will keep a calf fat all winter, and all the milk can be taken from the cow for domestic purposes. We boil turnips with meal for our fatting hogs, and this food brings them rapidly forward for the pickling tub. Our stock hogs are fed a bate of raw turnips every other day as long as they last, with the best effects. To sheep and goats, we feed them whole and without washing, except to very old ewes. For these we chop them in sizes not larger than a walnut, as their front teeth will not permit them to munch out the roots, as younger sheep will do. Last winter our lambs all came in the depth of the snows and ice, and by the aid of turnips, and covered only by a small open shed, we saved every lamb yeaned. We feed our ewes liberally on turnips and hay, alternating every other day, with cotton seed. Independently of suckling the lambs, our sheep came out of the winter in fine condition and have since thriven most remarkably. We, therefore, have good grounds for a strong recommendation of this crop as an adjunct to sheep growing, and believe that no one can succeed without it.

We have also made extensive use of turnips in feeding our poultry. We cut them up in fine shreds and pour boiling water over them. Ducks and chickens relish them when thus prepared. For geese, we use the small turnips, which we throw to them whole, as they readily cut them up with their sharp teeth. We regard no poultry yard as furnished with suitable food in winter, unless it has an ample store of turnips, as they supply to the poultry all that is required in the way of green food. These uses for animals, being so beneficial, when we come to an appreciation of their value in these particulars and essentials can be grown on the plantation.

Several years since, we published a recipe for properly cooking turnips, which a distinguished agriculturist avowed was worth one hundred dollars. We now give it for less than a thousandth part of that sum. Turnips, after being cooked with nice, half-cured pork, or boiled in water and properly seasoned, should

whilst simmering, just before being dished up, have a small quantity of the best sugar added to them. The quantity is to be determined to suit the taste—a spoonful or two will be sufficient for a dish for half a dozen persons. This takes away all the turnip flavor, so objectionable to most palates, and renders the turnip a delightful and inviting dish. It also fits it for delicate stomachs, which otherwise could not bear this kind of food.

Preserving Turnips, &c.—As soon as the frost has stopped the growth of the plants, and there is reason to apprehend their freezing, begin to take them up. A handy person, with a large knife, cuts off the tops so close that they will not sprout, and at the same time, cuts off the tap roots. The turnips are laid in rows on one side and the tops on the other, to be gathered up by the carts, and carted to the storing ground and barn. We feed off the tops to our cattle as rapidly as they will eat them, though if left in the field in small heaps they will keep in feeding condition a long time. For our turnip roots, we elevate a bed and store them in long conical ridges, over which we erect a roof of boards, covered with earth to the depth of six inches. At intervals of six or eight feet we place ventilating tubes made of six inch boards, perforated with auger holes, or what we regard as better, three inch laths nailed round a head piece four inches square. These will leave a small slit all the way through the heap, up the four corners of the tube, and the impure gasses will readily escape. During very cold weather, the top must be closed by a triangular cap, made of two pieces of boards saddled over the cone of the roof upon a wisp of straw. Those which we wish to save later in the season, we put up in conical mounds covered in as sweet potatoes usually are. We put from twenty-five to forty bushels in a heap, aad when we break it, we use the contents immediately. With these precautions, we have frequently kept turnips till we had no further use for them in the Spring, and the pastures were green with grass.

Spring Balances. An improvement in spring balances has been made by Elisha P. Beckwith, of New London, Conn., who has applied for a patent. It consists in surrounding the balance with a cylindrical funnel of sheet metal, or other proper material, and having its periphery graduated so that not only the weight of the article is determined, but also its cost, at a given price per pound.—*Scientific American.*

From the N. Y. Horticultural Review.

The Compost-yard.

It is impossible to carry out good gardening without composts or fresh soils. It signifies little whether the gardens be one acre or fifty, whether they contain one plant-house or a dozen; a compost-yard becomes a necessary adjunct, and deserves the title, although it may contain only two or three kinds is as many cartloads.—Ladies and gentlemen who are unacquainted with the practical details of gardening, are apt to wonder why so much fuss should be made about soils; but their wonder would cease could they, for only a couple of years, go through the routine of practical gardening and plant culture. Could what gardeners term the potting-b aid tell tales, it would reveal many a secret which might astonish those who have not dabbled in composts, manures, drainages, &c.

And this is not all mere empiricism; the first gardeners in the land, from Sir J. Paxton downwards, will bear us out in the absolute necessity that exists for a potting bench; the latter, of course, of little use without the compost-yard. We think it was Rousseau, or some witty Frenchman, who said that a knave and a fool were made for each other; and truly the same may be said of the potting shed and the compost-yard.

But the very kitchen garden and the flower garden have their demands on this useful, out-of-the-way place, and we must proceed to show forth a simplified course of practice in regard of soils. What gardeners term loam is the first in the list of necessary materials. To describe what a good loam is, in the eye of the gardener, is a most difficult affair; good gardeners in this matter are mere rule-of-thumb men; color is not a paramount object—it is more a matter of texture; and we know gardeners who could tell a good loam blind-folded, so that the finger and thumb would appear to be pretty good judges in these matters.

To those amateurs, ladies or gentlemen, who, not having experience in gardening affairs, yet desire to acquire such, we would particularly address ourselves, as to this material called "loam." All loams are simply soils composed in the main of sand and clay in various stages;

their degree of cohesion at once points to the percentage of the clayey principle—their want of fixity or amount of incoherence pointing alike to the predominance of the sandy principle.—Therefore, between the two antipodes, sand and clay, there are innumerable grades.

But, to be off hand in the matter, let us assume three points in judging a loam. First, a good loam should be almost or quite homogeneous in color; it should be rather adhesive—even when half dry; it should, if possible contain much organic matter, or other words, the remains of bygone vegetation—the roots of grasses, herbs, or even plants of half shrubbery character. As to color, it may be almost yellow, or it may be a dull hazel; these things, although they possess their respective meanings, are but of secondary import. What we want of loam, in the main, is the quality of adhesiveness or coherence; without which, composts, whatever qualities they may possess in a manurial sense, do not "wear"—to use a technical phrase.

The next soil in point of importance in the compost-yard is peat, as it is commonly called; but, as this term is used with so much laxity, we must offer a few passing remarks. It is a common practice amongst gardeners to talk about bog soil, peat and heath soil, as though they were the same material, or it were immaterial which formed part of the composts; but they are widely different. Heath soil is that dark soil containing much sand—generally one-third its bulk—which is found on upland moor soils, and covered with the common heath or heather. Bog or peat is that dark, fatty material which is dug out of morasses; such, indeed, as is dried and sold for fuel in many parts of the kingdom, and containing but little sand. This, in a raw state, fresh dug, is said to contain a superabundance of humic acid, which is prejudicial in the culture of plants; it therefore requires to lay some time in the compost-yard, and to be turned occasionally. It is not, however, the proportion of sand they contain which distinguishes them; they are very different as to the mechanical textures: although in both the fibrous portion is simply vegetable matter in various stages of decay. The fibrous portion of the heath soil is, in the main, woody fibre, giving a strong and enduring texture to the compost; that of the peaty soil is chiefly derived from annual or herbaceous vegetables, and is, of course, quicker in action and more liable to perish. Sandy heath soil is by far the safest for choice plants which have to remain long in their pots, whilst the peaty material is adapted to plants of rapid growth and which are destined for a disrooting system, or to be entirely replaced by fresh, young stock.

Vegetable Mould.—Although this is not indispensable in the compost-yard, it is of eminent service, still it must be confessed that a gardener with good loam, sandy heath soil and old manure, can grow any plant in existence well. Vegetable mould is of various kinds, although what the gardener terms leaf-mould is the most popular. But, in truth, when in a highly decomposed state, it signifies little what this humus is derived from; whether leaves of trees and shrubs, decomposed weeds, or indeed anything that has once been a growing vegetable, water weeds and mosses excepted.

Manures.—It would seem almost superfluous to recommend manures for the compost-yard, since they are in general the first things thought of. We wish, however, to point in a special way to one or two of importance to the plant grower, as also to show the best mode of handling them. The old dung from decayed hotbeds is a favorite manure with most gardeners, and very useful it is for general purposes, provided it has been frequently turned, and well handled by the spade. But the most useful manure of all, in our opinion, is very old cowdung. This should be at least twelve months old; in fact, when in proper order for the potting-bench, it should resemble well humoled peat soil. There are other manures of great power, when high concentration is required; but we pass by them. We may here direct the reader's attention to one great fact: that since the utility of liquid manure has been generally recognized, the gardener feels much less anxious about the introduction or manurial matters into his soil.

Sand is another important affair to add to the compost-yard—indeed, a material we cannot do without. There is scarcely a compost made up by a good gardener, but sand, less or more, finds a place in it. Sand for this purpose should be very sharp, fine and clean.

We have here enumerated a few things which should be in every compost-ground, and we may now be permitted to offer a few remarks pertaining to the general economy of composts.

In the first place, a compost-yard must be perfectly dry beneath: no water must lodge

here, or the composts will be seriously damaged. Secondly, all soils or composts should at all times be piled up in the form of a sharp ridge, in order to exclude rain, which robs them of their virtues.

The best time, in our opinion, to collect the various soils, &c., is the month of September. The turfy loam in our fields, commons, &c., is then full of the fibrous produce of the past summer, and the soil may be obtained dry if the proper opportunity is sought. By the way, this obtaining soils when in a tolerably dry condition is a point which we must particularly direct attention to; soils handled in a wet state lose half their character. For the reasons adduced on behalf of the loams, peats and heath soils are in the best condition at this period; the accumulated summer heats in the soil have in general been more than a match for the aggregate amount of summer rains, and the necessary consequence is an open and porous condition in the soils, highly favorable to the compost gatherer.

Again, then we say to those who desire to systematize matters, and to keep pace with the age in gardening affairs, lap in your soils in September; be sure they are tolerably dry when handled; pile them in sharp ridges; and where speedy decomposition in the object, as in the case of peats, leaf-soils, &c., turn them frequently. But where there is a reason for making the organic constituents endure as long as possible, and preserve their mechanical texture—as in the case of fibrous loams—then, we say, pile in a ridge, as in the other cases, but do not disturb that ridge until the material is required; it will thus, after laying six or eight months, chop down by a sharp spade into the most valuable soil the gardener possesses. In the case of hair-rooted plants, such as the epacris family, the ericas, &c., of course the good cultivator falls back on his sand heath soils, handled in a similar way.—*English Country Gentleman.*

The Manufacture of Watches.

A watch is no longer, as it was formerly, an object of luxury, destined exclusively for the rich; it has become an article for every class in society, and as, together with the increased perfection of this article its value has at the same time considerably diminished, it is evident that a common watch, which will exactly indicate the time of day, is actually, by its low price, within the reach of almost every individual, who will likewise feel anxious to possess one.

For this reason, and in proportion as commercial, and maritime relations are extended and emancipated from the trammels in which the great central marts of commerce have involved them, so will distant nations become civilized; and it may be fairly anticipated that the art of watch-making will form part of the great current of improvement.

The number of watches manufactured annually in Neufchatel may be calculated to be from 100 to 12 ,000, of which about 35,000 are in gold. and the rest in silver.

Now supposing the first, on an average; to be worth $30, and the other $4, it would represent a capital of $1,309,000, without taking into consideration the sale of clocks and instruments for watch-making, the amount of which is very large.

The United States of America consumes the largest quantity of these watches With the exception of gold and silver for the manufacture of the watch cases, the other material for the construction of the works or mechanism of the Neufchatel watches are of little value, consisting merely of a little brass or steel. The steel is imported from England, and is reckoned the best that can be procured; the brass is furnished by France.

With respect to gold and silver the inhabitants of Neufchatel have had for a long time no other resource but to melt current money until they received gold from England, which the English merchants received from California.

The number of workmen who are employed in the watch making is estimated at from 18,000 to 20,000, but it is difficult to arrive at the exact number, as the population employed carry on the business in their own houses.—*Merchant's Magazine.*

To Sportsmen.—Wash your gun barrels in spirits of turpentine, by dipping a rag or sponge fastened on your gun rod into the liquid and swabbing them out two or three times, when they will be cleaned from all impurities, and can be used almost instantly, as the turpentine will evaporate and leave the barrels dry; even if they are a little moist it will not prevent their going off, like water. After being washed thus, there is no danger of rust as when water is used. I am an old and experienced gunner, and have practiced this for years.—*Scientific American.*

Skin Diseases of Domestic Animals.

This is a topic demanding the earnest attention of stock-breeders and farmers generally.—Skin diseases, produced by insects, are by no means uncommon, and seriously affect the breeding and feeding qualities of animals. Till recently, but little scientific progress had been made in regard to the natural history and treatment of these parasites. Professor Simonds, the Veterinary Inspector of the Royal English Agricultural Society, recently delivered a lecture before the Council on this subject, from which the following statements are gleaned:

All domesticated animals are more or less affected by peculiar parasitical insects, which may be divided into three great classes—1. Insects attacking the external parts of the body, on which they pass through the whole period of their existence, as the *acari*, producing scab, magi, &c. 2. Insects which pass their larvæ condition only on the skin, as a temporary *nidus* from which they escape as flies on assuming their winged condition. 3. Insects, most destructive to animal life, lodged in the internal organs and cavities of the body.

Some confusion had arisen from giving different names in case of lower animals to diseases identical in their character; the mange and scab in the horse and sheep being analogous to the itch or scabies in the human subject. It would be more simple to include all such diseases under the general term "scabies."

It is well known, both in Canada and Europe, that the scab often leads to serious losses to flockmasters, by its tendency to deteriorate the wool and the general condition of the animal.—Its cause was not satisfactorily determined, till a German physiologist clearly proved the wide distribution of acari or mites, in dirt or filth, sugar, cheese, flour, and most vegetable substances He found that the male and female acarus of the horse and of the sheep possessed well defined characters in the case of each of those animals, the former being the cause of the mange, and the latter of the scab. These mites have the power of traveling from one animal to another; and the scab disease of sheep will sometimes affect the whole flock, if not arrested. From carefully conducted experiments, Professor Simonds concludes that the mites belonging to one class of animals could not engender the same disease on the bodies of another class; that the mite which produced scab on sheep was not capable of producing mange on the horse or dog. This conclusion, however, from recent experiments made in Germany, may be regarded as somewhat doubtful.

The deposition of the acari on the skin of the sheep and the development of the scab disease, may be traced as follows:—"First, a slight redness comes on the skin, albuminous fluid is exuded, which mats the adjoining wool. In a few days, definite pain is felt by the animal, which violently attempts to scratch itself by rubbing the part against any resisting object.—The irritation extends to ten or twelve inches. The disease makes rapid progress. Acari had traveled over other parts of the body. In sixteen days, fifty or sixty eggs of the acarus were found at the base of the wool. Large thickened crusts of a white appearance were formed. The health of the animal and its skin became generally affected. Large scales or scabs, ensued, which, on being raised, a great number of acari could be detected. Inflammation on the skin ensued. The itch in the human object arose from the same cause; the acarus burrowed beneath the scale of the epidermis, or outer skin. This affectation was known to be more communicable when the person was warm in bed, the acari then coming freely out and extending their operations The itch-mite insinuated itself *within* the skin, while the mites of the horse and sheep made their attacks *upon* the skin."

These minute creatures are wonderfully endued with the power of extracting the juices of the skin by their suctorial dises; of adhering to the wool or hair by their hooklets; and their trumpet-shapen apendages enable them to hold themselves securely by valves to flat surfaces. The female mite is larger than the male, and is adapted to propagation, while the male is peculiarly formed for socking the skin. The disease is the result of their joint action. Professor Simonds had found these scab-mites alive and vigorous fourteen days after they had been removed from the backs of the sheep; and he considers that there is great risk to any fresh healthy flock occupying the ground from which infected sheep had been removed less than two or three weeks.

The cure of scab is not generally a simple process. The cause must be throughly removed,

viz: the destruction not only of the mites, but their *eggs* also. Many of the proposed remedies destroy the insects, but not the eggs, which in a few days may turn out a fresh swarm of living creatures. Dippings, ointments, &c., occasionally, a l failed, by not reaching the eggs. Arsenical applications are more potent; hut from their virulent poisonous n ture, require the greatest care in applying. The pre erable form of such s lution is that of ar eniate f potash, blended with vegetable infusions, such as those of foxglov , henbane, dock-roots, &c. wo ounces of common arsenic and two ounces f carbonate uf lime, boiled together in a qoart of wate , u til dissolved. when a further quantity of water may be added. To thi gallon of solution, a gal lon of vegetable infusion may he added, made by pouring a gallon of boiling water over four oonces o f xglove leaves and allowing the infusion to remain t ll co d, when it may be poured off. Half a pint of it, at intervals o a few days, should be sprinkled (from a bottle, through a quill in the cork) on the skin at the back and si es of the s eep. Two or three d essings will generally be found soffieient to cure the most inveterate cases of scab.

Parasitical insects often tr vel to other ani mals; and without producing the identical diseases as they do on the animals to which they naturally belong, nevertheless they frequently occasion a great amo nt of lo al irritation of an annoying character on the skin. Poul ry sometimes s arm with insects e pecially lice and mites, which often travel to ther animals.—Horses may appear to have t e mange, while the effect is simply th inflammation produced by p ultry ticks, and admits of easy cure by means of oil impregnated w.th sulphur

The *waroles* belong to a class parasitical insects, which pass only one period f their existence in the skin o animals. the short period of th ir larvæ or grob state—before they assume their winged form as es. Small tumors are commonly seen on the acks of the farmer's best-doing s ock, e ch containing a small maggot gr ob, or bot, the larvæ state of the gad or breeze fly. ome species of this fly eposit their eggs in the nostrils of sheep and in the hair and skin of horses, where they are hatched; being licked up by the horse, and passing into th stoma h, and afterwards through the intestines as bots The ca tle gad-fly deposits its very m nute egg on the skin of the animal, which, being, hatched by heat, passes beneath the scarfskin, and lays secure, feeding on the unctuous secretions of that integument. It afterwards burrows into the skin, and insinuates itself below it, and thus remains secure all winter. In the spring diffused swellings are observed on the backs of cattle, which give pain on pres ure, in consequence of inflammation. The grob li s in its nidus, or nest with n the true skin, till the approach of summer, when its white color becomes dark, and it makes its way out of its retreat. On the ground it soon assumes the chrysali state, es pes from its shell as a gad fly, lays its eggs, nd dies. The eggs again produce grubs, and the same wonderful cycle of changes succeeds. it is the same with the bots of the horse.—When they lost at maturity th ir power of attaching them elves to the stomach, they slipped their holdings, and passed out of the stomach throu h the intestines to the ground, when they assumed the chrysalis state and became flies.—The egg of the sheep gad-fly was deposited about the middle or latter nd of summer. The sheep were then herded together with their heads down an violently stamping with their feet.—The fly at length deposited its egg in their nostrils, and the hatched grub penetrated through the intermediate cavities to the frontal sinuses, when a plate of bone prevented its getting into he brain. arious affections in the brain of sheep, such as virtigo, gig, giddy, turnsick, goggles, &c., have been erroniously ascribed to the gad-fly, but they hav a totally different origin, viz: arising fr m t e form tion of little sacs or bladde s, contain g hydatids. The mange in dogs is owing to the dog-flea; an insect that was the fruitful source of diseased action of the animal's skin, when i generat d and passed thr ugh a l its various gradations of existence.

The prevention of contagion among animals may be summed up in two word —*improved* ... Cleanliness, ventilation, exercise, nutritious diet, and temperance, have affected the mo t beneficial changes on the hu man race, within a comparatively hort period of t me, and it is not reasonable to conclude that similar causes will pr duce similar results among our domesticat d animals. We have yet much to learn and to do in rel tion to these important matters —*Canadian Agriculturist.*

Foul in the feet, cleanse between the hoofs with a bone, and put in powdered blue vitrol

Wheat—Its Culture.

There are five kinds of grain, upon which mankind principally subsist: Wheat, Rye, Indian Corn, Rice and Oats. Wheat grows in a great variety of climates. The iso-thermal curve of 57 deg. and 2 min. appears to be its utmost boundary in North America, though in Europe it is grown at Drontheim in Norway, in 64 deg. north, a mean temperature of 40 deg. in summer. It is not grown nearer the equator than 20 deg.

In 1632 wheat was introduced and sown on the Elizabeth Islands in Massachusetts. In 1611, it was sown in Virginia, and in 1648 hundreds of acres of it were grown in that colony, though soon afterwards tobacco claimed procedence, and wheat became neglected. It was in 1718 that it was first grown in the Mississippi valley, but it did not succeed well, owing to the peculiar character of the soil, growing too much to straw and producing but little grain; however, in 1746, in consequence of a better culture perhaps, it was exported from the Wabash Valley to New Orleans.

During the last fifteen years the gain in the production of this crop in the United States has been over sixteen millions bushels, while at the same time it has decreased in New England over one million bushels. It is estimated that one bushel of seed is used to every ten produced, and that three bushels are used annually by every individual of the population.

There are eleven species or sub-species named by botanists, but it is more than probable that some of them are mere varieties. In this country two only, winter and spring wheats, are generally grown. The grain of spring wheat is not usually as large as that of winter wheat, but it contains more gluten and is preferred by many, who think it makes a more palatable bread. It is unpopular, except where it is impracticable to grow the winter species. Sir John Sinclair tells a story, the correctness of which we doubt somewhat, as we do some other things which he has written, that the Scotch farmers were in the habit of sowing fall wheat in March, and that it ripened as well as fall sown wheat. The experiment has not yet been tried in this country, to our knowledge, but we should not expect much from the trial. Spring wheat should be sown as early as possible, the soil may be lighter than that necessary for winter wheat, but to insure a good crop, it must be in good condition as to fertility. Rolling the land after sowing, especially if the soil is light, is highly important. From one and a half to two bushels is the quantity of seed per acre. Grass seeds generally do well with spring wheat and they should seldom be omitted.

The varieties of fall wheat are very numerous, differing in appearance, in constituent qualities, in adaptation to soil and climate, in their power to resist disease and insects, and in productiveness.

Under our present system of culture there is one fact of general application regarding wheat, which is, that a given variety, though it succeeds better than any other when first introduced, by-and-by begins gradually to deteriorate in the qualities which at first recommended it. We are not prepared to say that this is owing to bad management or improper culture altogether,—we should not like to make this accusation against our best farmers. They will agree with us, however, as to the fact alluded to. That we sow a great deal of imperfect seed, which produces imperfect grain, or grain lacking a strong vitality and vigor, and which in its turn again produces week and feeble plants, bearing a diminished product, no observant farmer doubts. Yet is this cause alone sufficient to account for the deterioration spoken of? We are not able to determine this question.

General Harmon, of New York, one of the best, most extensive and observant wheat growers in the country, gave the following as the best varieties of wheat in the United States:

1. *White Flint*, probably introduced from the Black Sea into New Jersey in 1814. Its peculiarities are strong straw, solid grain with thin bran, the chaff adheres to the grain so that it does not readily shell out, is little affected by frost, has withstood the Hessian fly better than any other now cultivated. Its usual yield is from twenty to twenty-five bushels per acre.

2. *Improved White Flint*. It is superior to the last in the size of the berry, thinness of the bran and the weight per bushel.

3. *White Provence*, introduced from France. It grows rapidly, yielding much straw, ripens four or five days earlier than the common va-

rieties, withstands cold and is not injured by insects; but the straw is soft and it is apt to fall down. It is bald, berry very large and white, yielding flour well and of good quality.

4. *Old Red Chaff.* This originated in Southern Pennsylvania. It is a bald wheat with a red chaff, but a white grain and in other respects is similar to the last. On new oak lands it succeeds admirably, when the season is just right, but on old lands it is subject to rust, mildew, insects and winter killing.

5. *Kentucky White Bearded*, (*Hutchison White Flint*, *Canada Flint*,) a white chaff, bearded wheat which endures dry weather remarkably.

6. *Indiana Wheat*, originated in Indiana; a white chaff, bald wheat, peculiarly adapted to strong soils.

7. *Velvet Beard or Crete Wheat*, introduced from England twenty-five years ago; a red chaff, bearded large-berried wheat. It is very hardy, not apt to be thrown out by frost, nor injured by insects.

8. *Wheatland Red*, originated from the *Virginia May*, by Gen. Harmon; a red chaff, bald wheat, and not apt to rust.

9. *Golden Drop*, an English variety.

10. *Mediterranean*, introduced from the south of Europe in 1829. It is a light chaff, bearded, berry red and long, bran thick and flour inferior, but it is not injured by insects and ripens early. [Since Gen. H. wrote this, a great improvement in grinding this wheat, has been accomplished, and it bears a better character for bread, and is in better repute in the market.]

11. *Blue Stem*, cultivated in Virginia about sixty years since, but now generally grown in the Northern States. Formerly it was a red wheat, but now it has changed to a beautiful white. It is very productive. This list might be much extended, but it would be of no practical utility.

Sprengal analyzed 100,000 parts of dry wheat, and obtained the following inorganic constituents:

Substances in the.....	Grain.	Straw.
Potash,.....	225	20
Soda,.....	240	29
Lime,.....	96	240
Magnesia,.....	690	32
Alumina,.....	26	90
Silica,.....	400	2870
Sulphoric acid,.....	50	57
Phosphoric acid,.....	40	170
Chlorine,.....	10	30
	1777	3538

The organic portion of wheat consists of *albumen*, *gluten*, *starch*, more than half, *gum*, *dextrine*, *sugar*, *&c.*

The time of cutting affects the weight of produce as well as the quantity of organic matter, and the relative proportions of flour and bran. Johnston gives some experiments in cutting with the following results. That cut twenty days before ripe gave 160 pounds of grain; that cut ten days before gave 220; that fully ripe 209 pounds. The yield of flour and bran were in the same proportion—in favor of the portion cut ten days before ripe.

The best wheat soils are those which contain a good proportion of clay with lime and potash. Boussingault estimates "rich wheat land" to contain 75 per cent. of clay, 10 of sand, 4 of lime and 11 of humus; but we do not deem it at all necessary for the production of the largest crops that the soil shall consist of three-fourths clay—not at all. Nor is four per cent. of lime essential. In Great Britain, good crops of wheat are taken from very sandy soils, where the alternating system is employed.—By adopting a good system of rotation, with turnips and clover, and sheep, we can produce wheat on any arable soil.

As a *scourging* crop, wheat must be placed at the head of the list of grains. According to Boussingault, a medium crop takes from one acre of ground, in grain and straw, 17 lbs. phosphoric acid, 2 lbs. sulphuric acid, one of chlorine, 16 lbs. of lime, 13 lbs. magnesia, 24 lbs. potash and soda, 121 lbs. silica—all in the straw, and 2 lbs. of oxides of iron and alumina. It is therefore found impolitic, and indeed impracticable, to grow this grain for several years in succession.

Wheat, more than any other grain crop except barley, requires a *dry soil*. It cannot endure an excess of water either in the soil or sub-soil. It is water which by freezing and thawing causes the much complained of winter killing, rusting, &c. Wheat was never known to winter-kill on a dry soil, and seldom to rust. A dry soil, therefore, is the first requisite in growing wheat with profit. Next in importance is *good condition*. No farmer—and especially no poor farmer—can afford to raise a poor crop of wheat. Three poor crops of wheat in succession—where this grain is made almost the sole dependence as it is in the West—will cripple his energies for twice that

number of years to follow. The land should not only be well cultivated, but should be supplied with all the elements taken up by the crop as indicated by the above analysis.

Wheat may be safely and profitably grown after corn, barley or oats, providing the land is in good condition; otherwise it is bad practice under any circumstances. Taking a series of years into the account, estimating the influence of seasons and the depredations of insects, there is no better method of growing wheat, than the old fallow system affords. If there is more labor, there is also less hazard or risk. If there is a loss of the use of the land, during one summer, there is generally a gain in the amount of crop sufficient to make it up. This system admits of *thoroughly* working the land which the plan of sowing after another crop will not in every case allow, and this consideration is one of the highest importance.—What cannot be done in the *best manner*, had better be let alone altogether. This is the first rule in arable farming.

The waste of seed is very great in our common broadcast way of seeding. Stephens made the following calculation: Wheat at 63 pounds to the bushel gives 87 of its seeds to the drachm; or 701,568 apothecaries' weight, or 865,170 in avoirdupois weight. Now three bushels of seed are sown to the acre, or 2,595,510 grains of wheat. Suppose that each grain produces one stem, and every stem bears an ear containing the common number of 32 grains,—the produce of an acre should be 96 bushels; but the heaviest crop in Scotland rarely exceeds 64 bushels to the acre, or 33 per cent. of the seed is lost in the best crops, and 58 per cent. in an ordinary one of 40 bushels. This is a subject of great magnitude, although we seldom sow more than a bushel and a half or two bushels of 68 pounds to the acre. The loss of seed is attributable to two causes: imperfect grain and covering too deeply. We are too careless in the preparation of seed for the field. The small, light grains should all be taken out, and this may be done to great perfection with the Eagle Fan, now manufactured by Jarvis & Co. at Laporte, Indiana.

Then we sow in a very inconsiderate manner—dashing the seed on the ground so rough and uneven that it is with difficulty he who casts the grain keeps a straight course, or an even step across the field. In no case should wheat be buried deeper than two inches. In order to germinate freely a seed must have air, warmth and moisture. If covered too deeply, it will not sprout for want of air and heat.—Old wheat is better for sowing than new. It is less affected by bad weather and insects, and the stalks are more numerous and vigorous.—The proper way to keep old wheat for seed, is not to thresh it and let it remain exposed to air in the bin, but put upon some safe scaffold, let it remain unthreshed until seeding time arrives. Then let the threshing be done by horses.

In judging of seed, the dimpled end should be distinctly marked, and the point from which the roots protrude must be somewhat prominent as if it was swollen.—*Prairie Farmer.*

To Clean Chess out of Seed Wheat.

On our late visit to the farm of Mr. John Johnston, near Geneva, N. Y., he informed us that some years ago he was a believer in, and an earnest advocate of the theory that wheat would turn to chess. In some of the early volumes of the *Genesee Farmer* he cited several facts which had come under his observation, and which appeared to prove that, in spite of botanists and vegetable physiologists, wheat *would* turn to chess. This idea was combated by several correspondents of the *Farmer;* and, as Mr. J. confessed to us, he had to acknowledge to himself that he was worsted in this "paper war," Fully persuaded that he had the best side of the argument, and thinking that his opponents had the advantage simply because better skilled in the use of the pen, he resolved to prove beyond all controversy, by occular and practical demonstration, that wheat would turn to chess.

He took three bushels of wheat (we believe this was the quantity, but it is immaterial) and looked it all over, grain by grain, picking out all the chess. When he had finished, he was satisfied that there was not a grain of chess in the whole three bushels. Now, then, thought he, I shall have them; if I get chess from this wheat it won't do for them to tell me that I sowed chess with the wheat; and he had no doubt that, as usual, he should have "lots of chess." The wheat was sown; and the result was, that while there was an abundance of

chess in the wheat cleaned in the ordinary way, *there was not a single ear of chess on the land sown with the clear wheat.* This experiment, which Mr. J. made in order to convince the theorists that wheat would turn to chess, had the effect of convincing him that he was in error, and that the great cause of chess in wheat must be ascribed to sowing chess with the seed wheat.

Once satisfied that wheat would not turn to chess, Mr J. resolved to *sow* no more of it; and he hit upon a plan of cleaning seed wheat which took out every grain of chess. The method is simply this: After the wheat has been cleaned in the ordinary way, by running it through a fanning mill, *take the riddles out of the fanning mill, leaving the screen in;* take off the rod that shakes the riddles and screen; pour the wheat slowly into the hopper with a basket or a half bushel; turn the mill a little quicker than for ordinary cleaning, *and every grain of chess will be blown out*, unless where three seeds stick together, which is sometimes the case with the top seeds. Two men will clean from ten to fifteen bushels per hour. If the wheat is light, say weighing from fifty to fifty-five pounds per bushel, considerable wheat will be blown away with the chess; but where good Genesee wheat is raised, as in this section, weighing from sixty to sixty-four pounds per bushel, little or no wheat will be blown out. In some cases it is better to raise the hind end of the fanning mill about two inches from the floor; more wind can be given and not blow away the wheat.

Since Mr. JOHNSTON adopted this method of cleaning his seed wheat, he has not raised a "wine glass full of chess in more than twenty yeas."

We may remark that the same practice is very generally adopted in England, not only in cleaning seed wheat, but in cleaning all their grain for market, more especially barley.

There is a high duty on the process of converting barley into malt (about seventy-five cents per bushel); and the malsters naturally do not wish to pay duty on barley of an inferior quality, or on light grains that will not germinate, or, consequently, make malt. On this account, farmers are particularly careful to clean their barley before sending it to market. It is first run through the fanning mill to separate the chaff from it; then through a machine to break off the "pales," or beards; and then again through a fanning mill with a finer set of riddles and screen. After this, the riddles are taken out, and the barley is run through as in the process above described. Many farmers have a machine on purpose for this work, and consider it indispensible. It is called a "Heaving Machine." A good sample of English barley, when cleaned in this way, will weigh fifty-six pounds per bushel. On Mr. LAWES' farm, at Rothamsted, we have known his experimental barley to weigh fifty-eight pounds per bushel. This great weight per bushel, however, must not be attributed to the process of cleaning alone. It is more probably due to climate, inasmuch as the wheat, no matter how well it is cleaned, is not so heavy as Genesee wheat.

Mr. JOHNSTON thinks every agricultural paper in the country should give this process of cleaning wheat, and urge their readers to adopt it. If any wheat-grower will once try it, he will never again sow wheat without running it through a fanning mill in the way described.—*Genesee Farmer.*

From the Southern Planter.

Hollow Horn

MESSRS. EDITORS.—The good example set me by J. W. M., in the Planter of this month, prompts me to write an article on the disease, *here* called "*Hollow-horn*," which, in my opinion, is much more appropriate than "*Horn-ail*;" for, it at once declares the condition of the horn, and *all* will understand w. at is meant when it is mentioned. It is not generally considered a disease in itself? but the *result of a disease.* Let that be as it may, aoimals often die for the want of attention to—and skill in the treatment of the horn *directly.*

From experience in several cases among my own stock, and particular enquiry made of my neighbors who have had experience in the matter also, I do not hositate in endorsing J. W. M.'s theory; but must plead for the animal—to save the horns if possible, for several reasons, such, as the excruciating pain it inflicts, if a portion of the bone, or pith, of the horn remains; which, is hard to determine by having only a gimlet hole-through which to examine. I have had them thrown into convulsions by sawing off horns which were partially hollow;

and, as they are often poor and weak, they cannot well endure the pain, nor spare the great amount of blood that will escape after such an operation; also, the deformity; together with an open horn to receive rains, snows, and frosts the remainder of its life, are sufficient, I think, to save the horn if possible. Therefore, I recommend boreing first with an ordinary shingle gimlet into the lower side of the horn about two or three inches from the head; and if it is found (by using a crooked wire) that the born is hollow, *empty*, and dry, let there be a tablespoonful or more of finely ground black pepper, and as much fine salt blown into it through a quill. But, if the horn contains matter that cannot escape through so small a hole, enlarge it, even to three fourths of an inch in diameter, so the clots can escape, after the horn is emptied of all loose matter, blow in the pepper and salt.

If after this treatment the animal does not very speedly improve, remove one horn; and, if that fails, remove the other in a day or two, or sooner if absolutely necessary.

If the blood flows very freely after sawing off the horn, apply dry horse manure, (first filling up with pepper and salt) which keep to the place by the application of several thicknesses of cotton cloth well tarred.

The horn may be warm, and yet diseased; but, if the horn be *cold*, and upon tapping it with a hard substance, it sounds hollow, be assured that boreing is necessary.

I have always found accompanying the *hollow-horn*, a soft place in the tail, some six inches or a foot from the lower end, *a perfect decaying of the bone*—it is called here "the wolf in the tail," it should be attended to at the same time with the horn.

It is treated in different ways; one, by cutting off the tail above the diseased portion and filling it with pepper and salt and bandaging:—the disease can be detected by squeezing the tail between the finger and thumb.

These diseases are not confined to any condition; *fat cattle* suffer from them as well as poor.

Before I close, I would suggest that it is very important to raise all cattle that cannot get up themselves, as soon as possible; because, the longer they lay, the more discouraged they become, and will lose the use of their limbs. The best *simple* contrivance that I am acquainted with for the purpose is to procure a piece of strong linen as wide as from the fore legs to the hind ones—(the length of the belly,) and twice as long as from midway on one side, to midway on the other side, measuring underneath: then, sew the ends together (as a hoop,) and place it under the animal, it will be double; through each end pass a pole from twelve to fifteen feet in length; immediately in front of, and about three feet from the animal plant a strong stake about four feet high, and then raise the ends of the poles and secure them to the stake, as high, as midway the sides of the animal when standing; then plant a similar stake at the hind end of each pole; then, raise one pole at a time; or, both together, as the force may be; and secure each pole to its own stake as a proper height to elevate the invalid so it can stand. It is well to apply a leather strap around the breast from pole to pole; and, one also behind, to keep it from pitching forward or backward.

While it is all important not to let it lay too long, it is also necessary to let it down occasionally to relieve its limbs, &c. J. M. B.

Too Much Land.

The great error with our American Agriculturists is a morbid desire to own and occupy more land than they can cultivate. Farming is a scientific business, and is capable of being reduced to rules as precise and accurate, and we may add, as successful as those which regulate the manipulatory processes of the practical chemist. Washington, whose discriminating powers were certainly of an exalted order, in one of his valuable epistles to the celebrated Arthur Young, says:—

"The agriculture of this country is indeed low; and the primary cause of its being so is, that instead of improving a little ground *well* we attempt too much, and do it ill. A half, a third, or even a fourth of what we mangle, well wrought and properly dressed, would produce more than the whole, under our system of management."

Few apothegms, uttered by the sage of Mount Vernon, are possessed of greater force than this, even at this day, and it would be well for our agriculturists who are so anxious to extend the limits of their farms, without manifesting any further desire to augment their productiveness

and profit, if they would ponder it more carefully, and act more in accordance with the system it suggests. The most successful farmer with whom I have ever met, in any country, was a man whose entire homestead consisted of but fourteen acres. Like the Roman, Cressian, he managed to admirable advantage, everything within the amplitude of his profession, and derived, from this limited scene of operation, a living far superior in point of comfort and respectability, to that obtained by his more laborious neighbors, from farms, or freeholds rather, of quadruple the extent. We may form something like a correct conception of the actual capabilities of the soil, under proper management, by witnessing the operations of our gardeners. What is done or accomplished on a small scale, may certainly, with due care and effort, be accomplished on a large one; for gardening, which is so profitable, is nothing but farming in miniature.—*Germantown Telegraph.*

Matches.

Among articles of great demand, that have become of importance, though apparently insignificant in our own day, there is nothing more worthy of notice than the Friction or Lucifer Match. About twenty years ago, Chemistry abolished the tinder-box; and the burnt rag that made the tinder, went to make paper. Slowly, did the invention spread. The use of the match is now so established, that machines are invented to prepare the splints.

In New York, one match manufactory annually cuts up a large raft of timber for matches. Matches are generally square, and thirty thousand splints are cut in a minute. The process of shaping round matches is more elaborate, and only four thousand five hundred splints are cut in a minute. We will follow a bundle of eighteen hundred of thin splints, each four inches long, through its conversion into three thousand six hundred matches.

Without being separated, each end of the bundle is first dipped into sulphur. When dry, the splints, adhering to each other by means of the sulphur, must be parted by what is called dusting. A boy, sitting on the floor with a bundle before him, strikes the matches with a sort of mallet on the dipped ends, till they become thoroughly loosened. They have now to be plunged into a preparation of phosphurus, or chlorate of potash, according to the quality of the match. The phosphorus produces the pale, noiseless fire; the chlorate of potash, the sharp, crackling illumination. After this application of the more inflammable substance, the matches are separated and dried in racks.

Thoroughly dried they are gathered up again into bundles of the same quantity, and are taken to the boys, who cut them; for the reader will have observed that the bundles are dipped at each end. There are few things more remarkable in manufactures than the extraordinary rapidity of this cutting process, and that which is connected with it. The boy stands before a bench, the bundle on his right hand, a pile of empty boxes on his left. The matches are to be cut, and the boxes filled by this buy.

A bundle is opened; he seizes a portion, knowing, by long habit, the required number with sufficient exactness; puts them rapidly into a sort of frame, knocks the ends evenly together, confines them with a strap, which he tightens with his foot, and cuts them in two parts with a knife on a hinge, which he brings down with a strong leverage. The halves lie projecting over each side of the frame; he grasps the left portion, and thrusts it into a half-open box, which slides into an outer case; and he repeats the process with the matches on his right hand.—This series of movements is performed with a rapidity almost unexampled; for, in this way, two hundred thousand matches are cut, and two thousand boxes filled, in a day, by one boy.

It is a law of this manufacture that the demand is greater in the summer than in the winter. The increased summer demand for the matches, shows that the great consumption is among the masses—the laboring pupulation—those who make up the vast majority of the contributors to duties of customs and excise. In the houses of the wealthy there is always fire; in the houses of the poor, fire is a needless hourly expense. Then comes the match to supply the want—to light the afternuon fire to boil the kettle. It is now unnecessary to run to the neighbor for a light, or as a desperate resouree to work at the tinderbox.

The matches snmetimes fail; but they cost little, and su they are freely used, even by the poorest. Their value was suffieiently shown when an English officer, in camp at Sevastopol, recently wrote home, that no want was greater, than that of the ready means of procuring fire

and light, and that he should hold a box of matches cheap at half a crown (fifty cents of our currency).—*Student and School Mate.*

Contrivance for Milking Cows.

This contrivance for milking cows is a novel arrangement of mechanism, intended for the assistance of dairy maids and others, who milk cows. The milking is done by means of a crank attached to a shaft, on which there are four elastic arms, of steel, the ends of which are furnished with rollers. On one side of the ring within which the rollers move, there is an elastic pocket, into which the animal's teat is placed. The back of this pocket is stiff, so that when the rollers, revolve, they will come in contact with the front part of the pocket and press it, with the teat against the back part. The teat thus pressed is relieved of its milk, which flows down through the pocket, and through the hollow case of the instrument into a tube, and thence into the milk pail. Nothing can exceed the simplicity of this device. Its size is convenient, and its cost not great. The inventor thinks that cows may be milked much quicker by this contrivance than by hand.—Neither the hand of the operator nor the teats of the cow are liable to be made sore, as they are when the pressure of the hand is continually applied. If desirable the instrument may be made with two pockets, so as to milk two teats at a time. The inventor of this improvement is Mr. H. A. Reeves, of Williamson, Wayne Co., N. Y., from whom further information can be obtained.

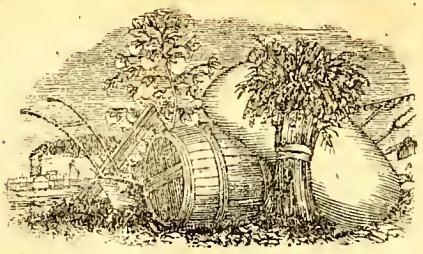
We would suggest an improvement to this invention, to wit:—The attachment of a music box to be operated by the main shaft, in such a way as to discourse sweet melody during the delivery of the milk. Few animals are insensible to the charms of music, and even insects are said to lend a willing ear. Under its fascinating influence the old cow may be expected to stand perfectly still, while the flies, forgetting to bite, will buzz around with joy.—*Scientific American.*

The English Agricultural Society has offered a premium of £500 for the best steam plow, no satisfactory invention of such a machine having yet been brought forward [in England.]

Cold.—For every mile that we leave the surface of our earth, the temperature falls five degrees. At thirty-five miles distant from the globe we get beyond the atmosphere, and enter, strictly speaking, into the regions of space, whose temperature is 225 degrees below zero; and here cold reigns in all its power. Some idea of this intense cold may be formed by stating that the greatest cold observed in the Arctic Circle is from 40 degrees to 60 degrees below, and here many surprising effects are produced. In the chemical laboratory, the greatest cold that we can produce is about 150 degrees below zero. At this temperature, carbonic acid gas becomes a solid substance, like snow. If touched, it produces just the same effect on the skin as a red hot cinder; it blisters the finger like a burn. Quicksilver or mercury freezes at 40 degrees below zero—that is, 72 degrees below the temperature at which water freezes. The solid mercury may then be treated as other metals, hammered into sheets, or made into spoons. Such spoons would, however, melt in water warm as ice.—It is pretty certain that every liquid and gas that we are acquainted with would become solid if exposed to the cold of the regions of space. The gas we light in our streets would appear like wax; oil would be in reality as hard as a rock; pure spirits which we have never yet solidified, would appear like a block of transparent crystal; hydrogen gas would become quite solid, and resemble a metal, we should be able to turn butter in a lathe like a piece of ivory; and the fragrant odors of flowers would have to be made hot before they would yield perfume. These are a few of the astonishing effects of cold.—*Farmer and Visitor.*

Corn For Forage.—The Western Agriculturist urges upon farmers the benefit of more extensive sowing of corn for forage. Its yield is immense, and cattle are very fond of it, and thrive well when fed on the leaves and stalks. For feeding green during the summer, to milch cows, the increase of milk is greater than by any other food. A crop can be sown either broadcast or in drills, using from one and a half to two bushels of seed per acre.

Cotton-wool and oil is said to be the best remedy for a burn.



THE CAROLINA CULTIVATOR.

RALEIGH, SEPTEMBER, 1856.

Meteorology—The Science of the Air.

This is one of the youngest of the Sciences. Considerable attention has been drawn to it during the last few years. The labors of Lieut. Maury in connection with ocean navigation have shown that much knowledge of practical utility may be derived from a careful study of the air. The officers of the United States army have for several years past carried on a series of observations, the results of which have been published by Congress. Co-operating with the Smithsonian Institute, there are many careful observers stationed in every State and Territory in the Union. Professor James Phillips has kept at Chapel Hill for several years a meteorological register, the results of which are sent every month to the Smithsonian Institution. Thinking that a record of this character might be interesting to our readers, we have obtained from Dr. Phillips permission to publish in the Cultivator as much of his register as we have room for now, and will continue it in the following numbers. We begin with the first of May last, and give an abstract of the register to the first of July. In the following table the first column gives the day of the month, the second the hight of the Thermometer at two o'clock in the afternoon of each day, the third gives the hight, in inches, of the Barometer at two o'clock in the afternoon, and the fouth gives the depth of rain in inches which fell on the date opposite.

Abstract of a Meteorological Register for May and June, 1856, at Chapel Hill, N. C., by Prof. JAS. PHILLIPS, D. D.

Day of month	Hight of Thermometer 2 p. m.	Hight of Barometer 2 p. m.	Am't rain in inches.
May 1	77	29.58	0.621
" 2	81	29.41	
" 3	83	29.31	
" 4	67	29.40	
" 5	66	29.56	0.577
" 6	47	29.65	
" 7	64	29.43	
" 8	70	29.29	0.494
" 9	69	29.35	
" 10	66	29.42	
" 11	78	29.49	
" 12	82	29 57	
" 13	82	29.67	
" 14	77	29.70	
" 15	79	29.65	
" 16	81	29.58	
" 17	80	29 47	
" 18	78	29.35	
" 19	7.	29.30	0.055
" 20	87	29.34	
" 21	82	29.42	
" 22	76	29.69	
" 23	81	29.72	
" 24	90	29.62	
" 25	77	29.36	0:530
" 26	77	29.47	
" 27	84	9.43	
" 28	84	29 28	
" 29	85	29.30	
" 30	72	29.45	
" 31	70	29.75	
June 1	86	29.75	
" 2	88	29.75	
" 3	92	29.69	
" 4	94	29.59	
" 5	92	29.52	0.111
" 6	73	29.50	
" 7	73	29.51	
" 8	84	29 40	075
" 9	71	29.30	571
" 10	75	29.35	892
" 11	78	29.45	
" 12	84	29.45	
" 13	86	29.46	
" 14	86	29.35	
" 15	79	29.42	
" 16	82	29.60	
" 17	76	29.59	320
" 18	84	29.51	
" 19	91	29.47	
" 20	92	29.62	
" 21	90	29.64	
" 22	97	29 71	
" 23	97	29.63	
" 24	89	29.56	
" 25	90	29.55	335
" 26	94	29.53	
" 27	94	29 54	303
" 28			
" 29			
" 30			

Am't of rain during the month of May, 2.237 inches.
" " " " June, 2.507 "

Thus from the above table it will be seen that on the 8th of May at two o'clock, P. M. the Thermometer stood at 70 degrees; the Barometer at 29 inches and twenty-nine hundredths of an inch, (nearly 29⅓ inches,) and there was during the day a fall of rain nearly

equal to a half inch in depth (decimal of 0.494 of an inch). The whole depth of rain during the month of Juno amounts to a fraction over two and a half inches.

If observations of this kind could be multiplied and continued for a sufficiently long time there is no doubt that there would, in the end, result in great profit to all classes of the community, especially to the farmer.

The Crops.

From all parts of the country we hear more or less complaint of short crops. The failue is nowhere so absolute as in some former years, but seems to be more wide-spread, especially in the Southern States. We are however still inclined to believe that the average of all the crops will be pretty fair. The wheat crop in several counties of the State which we have visited, was a very good one. The corn crop on account of the late spring did not look promising about harvest, and the dry weather since that time has kept it back. But during the last two or three weeks we hear of an abundance of rain, which will still benefit the late corn very much. So that although the corn crop will be far below that of last year, there will probably be a sufficient quantity made for home consumption, and in some districts some for export. The causes which have cut short the corn crop are, first, the long continued cold weather of the Spring which prevented early planting; secondly, the drouth beginning about harvest and continuing through the month of July; and lastly, the bugs. The dry weather and the bugs coming at the same time have done a large amount of damage. In some fields we have seen the corn entirely destroyed by the myriads of these insects which have attacked it.

In our July number we advised our readers to make sure of a crop of turnips. Of course we could not then foresee the extent to which the corn crop would be injured. But we urged the culture of turnips as one of the regular crops wherever the soil is such as to admit of it. But the case of a partial failure in one of the principal crops, as in that of the corn, a crop of turnips will contribute very much towards remedying the evil. Peas and turnips used together will be sufficient for fattening pork, and this item alone is no inconsiderable onc. For wintering cattle they will be found equally valuable.

Terrapin, Extraordinary.

We were lately shown a *two-headed Tortoise*, which for beauty and perfection in its line is certainly ahead of any thing of the kind we ever saw or heard of.

This strange biccphalus, as learned men would no doubt call it, was found on Mr. Edward Mallet's plantation, five milcs south-east of Chapel Hill, some eight miles below the surface of the ground, at a short distance from a mud-puddle, in company with nine others, which, however, had only one head a piece.

It is of the size of a half-dollar, the shell roundish, smooth and hard, covered with a good many angularly concentric furrows.—The color is olive brown, with false meandering lines; the marginal plates are yellow with variegations. Sternum notched and also yellow. Heads and necks striped with irregular, waved, confluent yellow lines. Only one tail, with narrow yellow longitudinal stripes. Eyes dark green with a large, black vivid, pupil.—Four feet, palmated, with strong scaly folds and five claws. Hind legs with four claws only, the place of the fifth claw supplied with a web.

The two heads are well proportioned and well formed. One, however, is a little smaller than the other; and one of the eyes of the smaller head remains constantly shut. A little white corny beak adds greatly to the appearance of the animal. The two heads are connected about the neck we imagine, and the necks covered with a rugose, granulate membrane, striped with yellew. Considering their size and the comparative smallness of the shell, the heads are of course always protruding.

The creature is alive and kicking.

Ohio State Fair.—We have received from G. Sprague, Esq., Corresponding Secretary of the "Ohio State Board of Agriculture," a complimentary ticket for the Ohio State Fair to commence at Clcaveland, Tuesday, Sept. 23d. It would give us pleasure to be able to attend the Ohio Fair but it will be out of our power to do so this year. The Corresponding Secretary will please accept our thanks for his kind invitation.

New Music.

We have received the following music from Horace Waters, No. 333 Broadway, New York.

Sparking Sunday Night—*With Variations. By S. Markstein. Price* 35 c.

In a musical sense these modern variations on the "time-honored," and we have no doubt to most persons, agreeable custom, are most beautiful, and will beyond doubt become very popular, on the principle of "the more of a good thing the better."

Popular Quadrilles.—*By James Bellak.—Price* 25c.

"The 'Quadrilles are beautifully arranged from the favorite airs—'Our Boys,' Jeannie Marsh,' 'Bouquet Schottisch,' 'Looking Around Polka,' 'Let us Speak of a Man as we Find Him,' 'Kitty Tyrrell,' etc., forming a beautiful *melange* of melody, with the order of the dance printed in the intermediate spaces."

Songs without Words.—*Six Ballads, named after the six days of the week, by Oscar Comettant. Price* 25c.

The productions of Mons. Comettant's genius, whether musical or in the form of "Notes on America," are sure of a cordial welcome from the public, and when he makes his appearance in the form of the present musical series his success is certain. The pieces are especially intended to improve the musical taste of pupils.

The Rose Rondo.—*By Mary T. M. Glashan. Price* 10c.

To Cure a Balky Horse.—The following method has been tried successfully on horses that "would not pull" at the foot of a hill.—Tie a handkerchief over the horse's eyes and tell him go. He will step like a blind horse and draw as if there were no hill before him. Let those who have these pests of good temper, baulky horses, try this simple expedient.

The Best Remedy for Burns.—Take lime water and sweet oil, shake them together.—They will unite and form a kind of white soft soap. This applied to a burn will give immediate relief, and also heal the wound. The quantity of lime water should be about two or three times that of the oil. Lime water is made by stirring a few spoonfulls of lime which has not been slaked too long, in a pint of clear water, and then either letting it stand until it settles, or it may be filtered through blotting paper.

Express to Raleigh.—Many of our readers will be pleased to learn that the Adams Express Company have resumed their Expresses on the Raleigh & Gaston road, and that packages of every description can now be forwarded to Raleigh and other depots on the R. & G. road from any of the northern cities.—Mr. Wm. White, Jr., has been appointed Agent at Raleigh, and we congratulate the company upon their securing the services of one so well qualified for the situation.

Miscellaneous.

Judges to Award Premiums,

At the next Annual Fair to be held in Raleigh, commencing on the 14th October.

Thoroughbred Horses.

Edmund Townes, Granville, Charles Manly, Wake, Thomas McGehee, Person.

Horses for Road and Farm Work.

Hiram Nixon, Wayne, Jos. A. Whitaker, Franklin, Josiah Turner, Orange.

Matched Horses.

James Turner, Granville, John Lewis, Caswell, Payton A. Dunn, Wake.

Single Harness and Saddle Horses.

John B. Leathers, Orange, Henry L. Plummer, Warren, Charles E. Johnson, Wake.

Jacks and Jennetts.

Wm. K. Lane, Wayne, J. M. Moody, Northampton, Jno. L. Bridgers, Edgecombe.

Mules.

Dr. Wm. J. Hawkins, Warren, Robert Norfleet, Edgecombe, J. W. B. Watson, Johnston.

Cattle—Devons.

Thomas D. Meares, Brunswick, Jno. S. Dancy, Edgecombe, Dr. James E. Williamson Caswell.

Cattle.—Durhams, &c.

Dr. E. A. Crudup, Franklin, Dr. Wm. F. Holt, Davidson, Col. N. M. Long, Halifax.

Cattle.—Grades.

Sylvester Smith, Wake, Wm. A. Eaton Warren, Charles A. Harrison, Sampson.

Working Oxen.

Baker Staton, Edgecombe, S. S. Royster, Granville, A. T. Mial, Wake.

Fat Cattle.

Eldridge Smith, Wake, John Hutchins, Wake, John Trollinger, Sr., Alamance.

Milch Cows.

John Stafford, Alamance, George T. Cooke, Wake, Joseph S. Jones, Warren.

Sheep.

Needham Price, Wake, Seth Jones, Wake, Hugh McLean, Cumberland.

Goats.

J. Fontleroy Taylor, Wake, Jno. O'Rorke, Wake, Albert Hinton, Wake.

Swine—Large Breed.

Owen Fennel, New Hanover, Cullen Capehart, Bertie, J. C. Smith, Cumberland.

Swine.—Small Breed.

John Everitt, Wayne, Thos. S. D. McDowell, Bladen, Laurens Hinton, Wake.

Swine.—Natives.

Gaston H. Wilder, Wake, Wm. O. Green Franklin, Thaddeus Whitley, Johnston.

Poultry.

Thos. J. Blacknell, Granville, Turner W. Battle, Edgecombe, Rufus Jones, Wake.

Agricultural Productions—Second Class.

Abram W. Venable, Granville, John W. Norwood, Orange, Henry K. Burgwyn, Halifax.

Tobacco.

Thomas Miller, Granville, Duke Jones, Warren, William Long, Caswell.

Salt Provisions.

Bryan Grimes, Pitt, H. G. Spruill, Washton, Jos. B. Cherry, Bertie.

Dairy.

E. M. Holt, Orange, John J. Shaver Rowan, Benj. Trollinger Alamance.

Food, Condiments, &c.

Daniel S. Hill, Franklin, L. W. Humphrey, Onslow, R. B. Gilliam, Granville.

Fruit and Fruit Trees.

Dr. R. S. Mason, Wake, John Winslow, Cumberland, John H. Haughton, Chatham.

Vegetables.

Dr. R. C. Prichard, Warren, Thomas Howerton, Orange, E. J. Hale, Cumberland.

Plows.

Weldon N. Edwards, Warren, William Alright, Chatham, Elijah B. Hilliard, Nash.

Farm Vehicles.

Wilson Whitaker, Wake, Josiah Collins, Washington, Col. Cad Jones, Orange.

Pleasure Carriages.

John C. Washington, Lenoir, John R. Harrison, Wake, Ed. S. Winslow, Cumberland.

Saddlery.

John G. King, Franklin, Jno. M. Fleming, Wake, Henry T. Clarke, Edgecomb.

Machinery, Steam Power.

Charles F. Fisher, Rowan, William S. Ashe, New Hanover, John D. Whitford, Craven, R. A. Hamilton, Wake, R. C. Pearson, Burke.

Machinery, Horse Power.

Abram Rencher, Chatham, T. P. Burgwyn, Halifax, Thos. D. Hogg, Wake.

Machinery, Hand Power.

Calvin Graves, Caswell, N. E. Canady, Granville, Wm. L. Long, Halifax.

Cabinet Work.

H. C. Jones, Rowan, T. M. Dewey, Mecklenburg, Rufus Barringer, Cabarrus.

Hats & Caps.

Col. W. H. Tucker, Wake, John Averitt, Onslow, Col. W. S. G. Andrews, Wayne.

Sundries.

James Sloan, Guilford, John W. Cunningham, Person, Dr. Fred. Hill, N. Hanover.

Mill Fabrics.

Wm. Johnson, Mecklenburg, W. S. Battle Edgecombe, D. A. Montgomery, Orange.

Household Fabrics.

Wm. A. Graham, Orange, Geo. W. Mordecai, Wake, Jno. H. Bryan, Wake, Mrs. M. M. Henry, Wake, Mrs. S. S. Royster, Granville, Mrs. P. Cameron, Orange, Mrs. J. Lawrence, Edgecomb.

Paintings & Drawings.

Dr. Charles Skinner, Warren, Rev. Albert Smedes, Wake, Mrs. R. M. Saunders, Wake, Mrs. R. B. Gilliam, Granville, Miss M. H. Summerville, Warren, Miss Alice Jones, Rowan.

Needle, Wax & Shell Work.

John A. Gilmer, Rowan, Thos. Bragg, Wake, Mrs. T. W. Battle, Edgecombe, Miss Claypool Wight, N. Hanover, Miss Maria Cooke, Wake, Mrs. Letitia Walker, Guilford, Mrs. S. P. Cotton, Wake.

Flowers.

Rev. Jos. B. Cheshire, Edgecomb, Mrs. Perrin Busbee, Wake, Miss Susan Plummer, Warren, Miss Sallie Jones, Rowan, Miss Mary E. Battle, Nash.

Cotton-wool wet with sweet oil and paregoric, it is said, will cure the ear-ache soon.

State Fairs, 1856.

Wisconsin, Milwaukee, October 8—10.
Tennessee, Nashville June 4,5.
Ken. Ag. & mech, Lexington, September 9—12.
New Jersey, Newark, September 9—12.
Vermont, Burlington, September 9—12.
Canada East, Three Rivers, September 16—18.
Virginia, Wheeling Island, September 17—19.
Ohio, Cleveland, September, 23, 24, 25, 26.
Canada West, Kingston, Septemher 23—26.
Am. Pom. So'y, Rochester, September 24—3 .
Michigan, Detroit, September 30 & Oct. 1,2,3.
New York, Watertown Sept. 30 & Oct. 1.2,3.
Illinois, Alton, September 30 & Oct. 1,2,3.
Pennsylvania, Pittsburgh, Sept. 30 to Oct. 2.
Kentucky, Paris, Sept. 30 to Oct. 5.
Nat'n'l Ag. Show, Philadelphia, October 7.
California, San Jose, October 7, 8, 9.
North Kentucky, Florence, October 7—11.
New Hampshire, October 8, 9, 10.
Iowa, Muscatine, October 8—10.
North Carolina, Raleigh, October 14—17.
Georgia, Atlanta, October 20—25.
Indiana, Indianapolis, October 20—25.
Maine, October 28—30.
Alabama, Montgomery, November 11—14.

Salt to destroy Worms.

The following from the Germantown Telegraph may be good, though we are not prepared to vouch for the statements: "A weak brine, not exceeding the strength of sea-water proves a remedy for the squash destroyer, one of the insidious and persevering, as well as voraciously destructive enemies with which the gardener and fruit grower is called to contend. It is also a most effectual preventive of aphides, or plant lice, vermin which prey upon the cabbage and turnip tribes. In every instance of the application of brine to those vegetables that have fallen under our observation, its success has been complete.—No injury need be apprehended from a very liberal application, say one quart to a plant, if the solution be of the strength indicated.

All the cabbage tribe are liable to be attacked and fatally injured by minute maggots, resembling, very nearly, the maggots in cheese and which are doubtless the larva of some fly. There is another enemy, also, by which they are frequently infested, a small grub, similar in many respects to those found in corn and potato hills, and which not unfrequently are very destructive. Salt water applied to the hills will have a tendency to arrest their depredations, and if the application be repeated frequently, say one, two, or three days, it will effectually destroy or drive them off.

The water, however, should not be allowed to come in contact with the foliage, in this instance, but should be applied to the soil immediately around the stalks, but without coming in actual contact with them. To destroy the first named insect, it may be applied in a state sufficiently dilute to admit of a perfect ablution of every part of the foliage; but, as we said before, care must be taken not to make it too strong, or it will destroy the plant. Every cook knows or ought to know, that the washing of cabbage, lettuce, spinach, &c., in salt water before cooking or preparing for the table, is sure to expel every species of insect which so frequently seeks a habitation or shelter in these vegetables.

Lime Brick.

Some inquiries have been made of us respecting the new kind of bricks, made of lime and sand. We have never seen any of them and can tell nothing more than what we have learned incidentally in regard to them from a account given by the Patentee, (Mr. Foster).

One bushel of unslacked lime and cleve bushels of sand, are the proportions which h recommends.

The lime is first slacked, then thoroughl incorporated with the sand. Two method have been used to effect this. One is to si the sand and lime together, and then thorough ly stir the mass together. After they are thi mixed, a little water is sprinkled upon the mi ture, enough to make it sufficiently damp pack together.

Another method is to slack the lime and ri it off into a box with water, the same as in c dinary mortar for plastering, and stir in sa enough to make the requisite proportions, a leave it right for packing. The last process thought by some to be the best.

The materials being prepared, they are p into a smooth steel mould and subjected to great pressure, not less than one hundred to and more would be still better. These bric

r blocks are then carefully laid away, and exosed to the action of the air. They will graually harden, and in time become as hard as ranite.

Mr. Foster generally makes them ten inches ong, five wide, and four thick. He has a holow in the middle seven inches long, and one nd a quarter wide.

Dwyer in his Economie College building recommends them. He says the cost of manuacturing is about $7 1 2 per thousand, and he nicks they are as cheap as common brick at 2 1-2 per thousand. This proportion of price must of course vary with circumstances.

He also says that masons can lay them up hree times as fast as common brick, and they equire less than one third the amount of mor ar requisite for brick. They are of a beautiful gray color, and as smooth as a piece of lass.

It is reported that a block of this kind of tone or brick, sent to the Smithsonian Institute at Washington, withstood a pressure of 500 pounds to the square inch.

From the above facts, it is evident that in many parts of the country this kind of material will be much cheaper than common brick n those parts of the Aroostook country where ime is plenty and clay scarce, they would come uite cheap, although there would be some exense required to get a press strong enough for he purpose.

We should suppose, however, judging from heir composition, they would not do so well or those parts of the chimney where the greatst heat comes, as common bricks.—*Maine Farmer.*

How much depends on a Latchet

Our farmer friends should remember a quotation, which we find here from M. Say, showing how much depends on a latchet.

"Being in the country, I had an example of ne of those small losses which a family is exosed to through negligence. For the want of latchet of small value, the wicket of a barnard, leading to the fields was often left open. very one who went through drew the door to; ut as there was nothing to fasten the door ith, it was always left flapping; sometimes pen and sometimes shut. So the cocks and, ens, and the chickens, got out and were lost. One day a fine pig ran all the people about the place—the gardener and the cook and the dairymaid. The gardener first caught sight of the runaway, and, hastening after it, sprained his ankle; in consequence of which the poor man was not able to get out of the house again for a fortnight. The cook found, when she came back from pursuing the pig, that the linen she had left at the fire had fallen down and was burning; and the dairymaid having, in her haste, neglected to tie up one of her cows, the cow had kicked a colt, which was in the same stable, and broken its leg. The gardener's lost time was worth twenty crowns, to say nothing of the pain he suffered The linen which was burned, and the colt which was spoiled was worth as much more. Here, then, was caused a loss of forty crowns, as well as much trouble, plague and voxatiou, for the want of a latch which would not have cost threepence."

M. Say's story is one of the many examples of the truth of the old proverb: "For want of a nail the shoe was lost, for want of a shoe the horse was lost, for want of a horse the man was lost."

SAVE YOUR BACON.—About a couple of years ago, we were entertained at the house of a friend with a good, old fashioned dinner of eggs and bacon. We complimented our host on the superior quality of his bacon, and were curious to inquire the way to like success in the preparation of a dainty article of diet, though one that is better fitted for the palate of an epicure than for the stomach of a dyspeptic.—To our surprise we were informed that that portion of our meal was cooked eight months before. Upon asking for an explanation, he stated that it was his practice to slice and fry his bacon, immediately upon its being cured, and then pack it down in its own fat. When occasion came for using it, the slices slightly refried, had all the freshness and flavor of new bacon, just prepared. By this precaution, our friend had always succeeded in "saving his bacon," fresh and sweet through the hottest of weather.—*N. Eng. Enquirer.*

Straw matting should be cleaned with a large coarse cloth, dipped in salt and water, and carefully wiped dry. The salt prevents the matting from turning yellow.

Sun Screens for Evergreens.—All newly planted Evergreens suffer more from the sun-scorching, to which they are usually subjected the first season, than from all other disadvantages. A valuable specimen is hastily planted out, fresh from the nursery, where it has been grown in compact lines, each row shielding its neighbor, frequently from a different climate, and it is expected to flourish and withstand the usual exigencies of the seasons. It has no fibrous roots to infuse vigor, and as the warm weather stimulates the latent vital organism of the plant into a sort of spasmodic vegetable action, we see feeble and delicate shoots springing from the buds which, growing slenderly and rapidly, immediately afterwards wither and dry up. Defoliation soon ensues, and by midsummer the sanguine planter finds his hopes of possessing a beautiful Evergreen blasted, and in its stead he has only a handful of unsightly brushwood sticking where his cherished specimen once stood. The nurseryman who had properly nurtured and educated the plant, whilst it was under his care, is frequently blamed for its ultimate failure, and tree culture gets a back-set from which it rarely recovers, simply because a little precautionary care, was not exercised in properly planting, and protecting it after it was planted.

We adopted, last season, a simple and successful mode of protecting our Evergreen trees from the sun. Around each tree we drove, in a circle, eight stakes, and taking the long flexible branches of the common red cedar, nailed them to the frame work as high as the top of the tree. Wattling in the straggling sprays, both inside and out, made it a very dense protection. Care should be taken to make the circle sufficiently large to allow for two year's growth of the plant, after which time the screen could be safely removed, as it would be properly and fully established in its roots.—This fixture is not unsightly—in fact, the dark brown foliage of the cedar limbs, which does not shed off, gives a mellow relief to the surrounding green, and it is thus rendered more picturesque than any other screen that can be made. Any other long branched twigs thickly wattled in, makes a good screen, and a most beautiful ornamental fixture of this kind, lasting in its character, could be made out of the twisted fibres of the long Spanish moss, (*Tillandsia Usneoides*). The ground inside the screen can be mulched, and as the mulching is protected, and cannot be scattered, this process has not to be repeated during the season. The sun's rays from 11 noon until 4 o'clock are most injurious, and if not already attended to, immediately screen all your Evergreen trees from its blighting effects. Their increased growth and general luxuriance will amply repay you for the small outlay of labor required.—*So. Ca. Agriculturist.*

Rose Culture.—Four things are absolutely essential in high rose culture—a rich and deep soil, judicious pruning, freedom from insects, and watering when requisite. If any of these be wrong, the success will be in proportion incomplete. Soil is the first consideration; what is termed a sound loam, they all delight in; the soil should be adapted rather to the stock than the scion, or kind worked on it. The common or dog rose stock, thrives best on strong loamy soil; in half shaded situations; near water, without manure; cultivated roses require the latter, because they have more hard work to do; their amount of blossom, if weight alone be allowed exceed that of the dog rose—added to which they have less foliage.

Roses on their own roots, require that the soil be modified according to kind; we should not use so adhesive a soil to a Tea or Bourbon rose as to ordinary kinds; organic matter is here required. Depth of soil is of great importance to all kinds; it is the deeper species of fibres, situated in a proper medium, that sustains a good succession of flowers, in defiance of heat and drought.

A Judicious pruning reduces the rampant growth and increases the energies of those which are of a more delicate constitution—relieves from superfluous shoots and useless wood, and reduces the whole outline to a compact or consistent form. Insect ravages must be guarded against—tobacco water or fumes will do this; bathing them twice a day with water from a barrow engine is only objectionable from the time required. If you have not provided deep culture, watering, in dry times will be requisite; but this should be done thoroughly rather than frequently, stir without injuring the roots. Liquid manure,—say two ounces of guano to a gallon of water—should be given once a week. With this treatment every one may have fine roses.—*Horticulturist.*

Medical Use of Salt.

In many cases of disordered stomach, a teaspoonful of salt is a certain cure. In the violent internal aching, termed colic, add a teaspoonful of salt to a pint of cold water; drink it and go to bed; it is one of the speediest remedies knowu. The same will revive a person who seems almost dead from receiving a heavy fall, &c.

In an apoplectic fit, no time should be lost in pouring down salt and water, if sufficient sensiblility remain to allow of swallowing; if not, the head must be sponged with cold water until the sense return, when salt will completely restore the patient from the lethargy.

In a fit, the feet should be placed in warm water, with mustard added, and the legs briskly rubbed, all bandages removed from the neck, and a cool apartment procured, if possible. In many cases of severe bleeding at the lungs, and when other remedies failed, Dr. Rush found that two teaspoonfuls of salt completely stayed the blood.

In case of a bite from a mad-dog, wash the part with a strong brine for an hour, aud then bind on some salt, with a rag.

In toothache, warm salt and water held to the part, and removed two or three times, will remove it in most cases. If the gums be affected, wash the mouth with brine. If the teeth be covered with tartar, wash them twice a day with salt and water.

In swelled neck, wash the part with brine, and drink it, also, twice a day, until cured.

Salt will expel worms, if used in food in a moderate degree, and aids digistion, but salt meat is injurious, if used much.

Horse Shoes on a New Principle.—A Philadelphia mechanic has constructed a horse-shoe in sucb a manner that it requires no nails and can be put on by any one without the aid of a blacksmith. Attached to the shoe is a flange, extending around the hoof, and at the back of the shoe, which lies over the frog of the horse's foot, is a joint, held in its place by a screw, whicb allows the shoe to open and close so as to accommodate itself to tbe size of the hoof. Between the hoof and the plate is placed a layer of gutta pereha, for the purpose of preventing injury to the hoof or leg of the horse by concussion, while running over hard roads or streets. The mechanism is very simple, and the cost much below that of ordinary shoes.—*Cotton Plant.*

The Violet.—The perfume exhaled by Viola odorato is so universally admired that to speak in its favor would be more than superfluous. The demand for the essence of violets is far greater than the manufacturing perfumers are at present able to supply, and, as a consequence, it is difficult to procure the genuine article through the ordinary sources of trade. Real violet is, however, sold by many of the retail perfumers of the West End of London, but at a price that prohibits its use except by the affluent or extravagant votaries of fashion. The true smelling principle or essential oil of violets has never yet been isolated: a very concentrated solution in alchohol impresses the olfactory nerve with the idea of the presence of hydrocyanic acid, which is, probably a true impression. Burnett says the plant Viola tricolor (heart's case) when bruised, smells like peach kernels, and doubtless, therefore, contains prussic acid.

The flowers of the heart's ease are scentless, but the plant evidently contains a prineiple which, in other speeies of the viola is eliminated as the "sweet tbat smells" so beautifully alluded to by Shakspeare. For commereial purposes, the odor of violet is procured in combination with spirit, oil or suet, by maceration, or by enfleurage, the former method being prineipally adopted, followed by, when "essence" is required, digesting the pomade in rectified alcohol. Good essence of violets, thus made, is of a rich deep tint, has no power to stain a white fabric, and its odor is perfetly natural. The essence of violet, as prepared for retail sale, is thus made, according to the quality and strength of the pomade:

Take from six to eight pounds of the violet pomade, chope it fine, and place it into one gallon of perfectly clean (free from fusel oil) rectified spirit, allow it to digest for three weeks or a month, then strain off the essence, and to every pint thereof add three ounces of esprit de rose, it is then fit for sale.

We have often seen displayed for sale in druggists shops plain tincture of orris root, done up in nice bottles, with labels upon them inferring the contents to be "extract of vio-

let;" customers once taken in thus, are not likely to be a second time.

A good immitation essence of violets is best prepared thus:

Spirituous extract of cassia pomade, one pint; esprit de rose, from pomade, half pint; tincture of orris, half pint; spirituous extract of tuberose pomade, half pint; otto of almonds, five drops.—*Scientific American.*

IMPROVEMENT IN TELEGRAPHING.—In a late number of *Galignani's Messenger* it is stated that Giovanni Casella, of Florence, has just made a discovery which promises to cast all previous contrivances in electro-telegraph into the shade. He has invented an apparatus by which the telegraphic wire will transmit to any distance an exact fac-simile of any writing or design, when made to communicate with a similar apparatus at the other station. If the account of this extraordinary invention, which we extract from the *Courrier Mercantil*, of Genoa, be true, the transmission of telegraphic despatches by single letters will be entirely suspended, and the original writing put into the apparatus will be reproduced in an instant with the signature of the correspondent, as if written by himself.

A SHORT TOOTHED RAKE.—Do you own one Mr. Gardener? If not, you are still without one of the most comfortable, aye, and profitable implements used in your business. For cleaning paths, where the autumnal leaves found a nestling place for the winter, there is nothing like a short toothed rake. For raking the grass borders of paths, the short toothed rake will accomplish the work in half the time that any other will. For finishing off the bed, just made to sow with small seeds, nothing will draw out the pebbles, the bits of stick or course manure, like a short toothed rake!

What gives the house a more inviting appearance than a green door yard, covered with a carpet more beautiful than the art of man can possibly devise? One that need not be taken in when it rains, and whose color is not injured even if there be a little soap in the water. But it must be clean—no bones that Rolla has gnawed, no dead twigs from the old elm, or chips from the wood yard, must be left there. And here, too, the short tooth rake operates like a charm; it insinuates itself into every little recess, holds all it gets, and supplies plenty of soft dead grass to mulch the rose tree, or favorite plum or pear.

And then on the lawn! We do not mean the amateur's lawn of an acre or two; but the little sunny lawn of the common farmer or mechanic, who never dreamed of a regular lawn rake with its curved back and capacious maw. On such a little lawn, it is the king among rakes, small as it is. So do not take our word for it, but get a short toothed, and find a greater pleasure than ever in working in the garden, and a facility in accomplishing it altogether unknown before you wrought with a short tooth rake.—*New England Farmer.*

THE HAMMER.—The hammer is the universal emblem of mechanics. With it are alike forged the sword of contention and the plowshare of peaceful agriculture. In ancient warfare, the hammer was a powerful weapon, independent of the place which it formed. The hammer is the wealth of nations. By it are forged the ponderous engine and the tiny needle. It is an instrument of the savage and the civilized. Its merry clink points the abode of industry: it is a domestic ditty, presiding over the grandeur of the most wealthy and ambitious, as well as humble and impoverished.—Not a stick is shaped, not a house is raised, a ship floats, or a carriage rolls, a wheel spins, an engine moves, a press speaks, a viol sings, a spade delves, or a flag waves, without the hammer, civilization would be unknown, and the human species only as defenceless brutes; but in skilful hands, directed by wisdom, it is an instrument of power, of greatness and of true glory.—*Farmer & Mechanic.*

PAPER MANUFACTURE IN THE UNITED STATES.—There are in the United States, seven hundred and fifty paper mills in actual operation, having three thousand engines, and producing in the year two hundred and fifty million lbs. of paper, which is worth, at 10 cents per pound, $25,000,000. To produce this quantity of paper 405,000,000 pounds of rags are required—1 3-4 pounds of rags being necessary to make one pound of paper. The value of these rags, at 4 cents per lb., is $16,200,000.

PAPER is now made in Belgium from refuse tanned leather. After the tannin is washed

from the leather, about 20 per cent of old hemp rope is mixed with the scraps, and the whole is cut up and reduced to a pulp, from which the paper is made.

Domestic Hints.

To Preserve Sweet Corn.—Allow the kernel to assume its rich, saccharine, pulpy state; do not pluck too soon—then the kernel is watory; defer not too long—it will be too hard and dry. When plucked at the right point of growth, boil on the ear till fit for the table; remove from the cob with a table knife, and spread them on a sheet, in a good sunny exposure; a scaffold of clean bright boards is desirable; stir frequently for one or two days; keep from the dew or rain, and when well dried, hang up in bags in a dry place. It will be almost as good as when served up in the regular season, if care is observed in dressing. It should stand in water over night, and be boiled gently until soft and plump, and served up according to taste.

To make Tomato Wine.—Take small, ripe tomatoes, pick off the stems, put them into a basket or tub, wash clean, then mash well, and strain through a linen rag, (a bushel will make five gallons pure;) then add two and a half to three pounds of good brown sugar to each gallon; then put it into a cask and let it ferment. If two gallons of water be added to each bushel of tomatoes, the wine will be as good.

To make a nice dish for breakfast, take one egg and beat it up; add a table-spoonful of salt, pour in about two-thirds of a pint of water, then shee some bread, dip it in, and fry in a little butter. Serve warm, and you will find it to be an excellent dish.

Carpets last longest by being often shaken, preventing the dust under and in them from grinding out the texture; and by being swept frequently.

For a horse kicked in the stifle, put in fine salt often, and nothing else; or bind a small bag of fine salt on to the wound.

A Valuable Family Medicine.

So celebrated has Dr. M'Lane's Vermifuge become, that it is regarded as the only specific cure for worms. Families should never be without a supply of it. At this season particularly, when worms are so troublesome and frequently fatal among children, parents should be watchful; and on the first appearance of those distressing symptoms which warn us of their presence, at once apply this powerful and efficacious remedy. We are confident that it only requires a trial, to convince all that it richly merits the praises that have been lavished upon it. It is safe and infallible. Volumes of certificate can be produced, showing its great medical virtues.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa.** All other Vermifuges in comparison are worthless. Dr. M'Lane's genuine Vermifuge also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Another Case of Fever and Ague Cured.

A few days ago we recorded an astonishing cure of Fever and Ague by the use of Dr. M'Lane's Liver Pills. We have now another to mention, viz: that of Mr. James Sharpe, of Madisonburgh, who states that he had labored under a very severe attack of Ague and Fever, and was soon restored by the use of these Pills. Mr. Sharpe also expresses an opinion, founded on observation, that the Liver Pills are the best for billious complaints ever offered in his section of country.

Although long known as a sovereign remedy for chronic cases of Hepatic derangement, or diseases of the Liver, the proprietors of Dr. M'Lane's Pills were not prepared for the frequent, but gratifying evidences of its general utility and curative capacity. In this respect, this invaluable medicine has exceeded their most sanguine expectations, and induced them to hope that it will be introduced into every family in the United States.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Liver Pills, manufactured by Fleming Bros. of Pittsburgh, Pa.** There are other Pills purporting to be the Liver Pills, now before the public. Dr. M'Lane's genuine Liver Pills, also his celebrated Vermifuge, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS

Marvellous Cures.—We have always been slow to believe the wonderful cures which one medicine after another pretends to have made, —but slow as we are we will own up, when we are fairly convinced. Those of our readers who are acquainted with the cases of Mrs. Beach

and Mr. Farwell, will not think us lightly turned, when we confess our belief that Ayer's Cathartic Pills have virtues for purifying the blood which excel anything within the range of our acquaintance hitherto. For those who are not cognizant of the facts, we will say: *she* had been afflicted for over eight years with scrofula which only grew worse, in spite of all the remedies she could employ, until she took *Ayer's Pills*. Under their influence one after another of her sores have healed, until she is apparently as free from the complaint as ourselves. *He* has had liver complaint with pain in his side that disabled him from work for a long time; all other medicines had failed to afford him any permanent relief, but a few doses of *Ayer's Pills* cured him and he is now steadily at his old post of conductor on the cars.—*Middletown Daily Courier.*

Can Epilepsy be Cured?

We think the following letter from a respectable citizen of Mississippi will answer the question, and remove all doubts from every unbiased mind:

GRENADA, Miss., June 5, 1856.

Dr. Seth S. Hance, Baltimore, Md.—Dear Sir: I take great pleasure in relating a case of spasms or fits, cured by your invaluable Pills. My brother, J. J. Ligon, has long been afflicted with this awful disease. He was first attacked while quite young. He would have one or two spasms at one attack at first; but as he grew older, they seemed to increase likewise. Up to the time he commenced taking your Pills, he had them very often and quite severe, prostrating him body and mind. His mind had suffered seriously; but now, I am happy to say, he is cured of those fits. He has enjoyed fine health for the last five months past. His mind has also returned to its original sorightliness. All this I take a great pleasure in communicating, as it may be the means of directing others to the remedy that will cure them. Yours respectfully, &c.

W. P. LIGON.

☞ No person who is suffering from Fits, or Spasms, should neglect sending to Dr. Hance, after this, for a supply of his inestimable medicine. His prices are as follows: one box $3; two $5: twelve $24—sent by mail free, on the receipt of a remittance. Address SETH S. HANCE, 108 Baltimore street, Baltimore, Md.

Table of Contents.

	Page.
A short toothed Rake,	216
Contrivance for Milking Cows,	207
Cold,	207
Corn for Forage,	207
Domestic Hints,	217
Express for Raleigh,	210
Horse Shoes on a New principle,	215
How much depends on Latchets,	213
Hollow Horn,	214
Improvement in Telegraphing,	216
Judges to Award Premiums,	210
Lime Bricks,	212
Medical use of Salt,	215
Meteorology—The Science of the Air,	208
Medical Notices,	217
Matches,	206
New Music,	210
Ohio State Fair,	209
Paper Manufacturing in the United States,	216
Paper in Belgium,	216
Rose Culture,	214
Salt to destroy Worms,	212
Save your Bacon,	213
Sun Screens for Evergreens,	000
Spring Balances,	196
State Fairs,	212
Skin Diseases of Domestic Animals,	199
The best Remedy for Burns,	210
The Violet,	215
The Hammer,	216
Training a Balky horse,	194
The uses and preservation of Turnips,	195
The Compost-yard	196
The manufacture of Watches,	198
To Sportsmen,	198
To clean Chess out of seed Wheat,	203
Too much land,	205
The Crops,	209
Terrapin Extraordinary,	209
To Cure a Balky Horse,	210
Work for September,	193
Wheat—Its culture,	201

NORTH CAROLINA INSTITUTION

FOR THE

DEAF AND DUMB AND THE BLIND.

RALEIGH, N. C.

The next session of this Institution will commence the first day of September. Pupils should be sent promptly at the commencement of the session. Application for admission should be made to

WILLIAM D. COOKE,
Principal.

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June 16, 1856. 5—tf.

J. H Goocb, Oxford, N. C., solicits orders for the above plows.

WE HAVE IN PRESS, and shall publish August 16, the Confidential Correspondence of the Emperor Napoleon, and the Empress Josephine including letters from the time of their marriage, until the death of Josephine; and also, several private letters from the Emperor to his brother Joseph, and other important personages. With numerous illustrative notes and anecdotes. By JOHN S. C. ABBOTT, author of "Life of Napoleon," &c., &c. One vol., 12mo. Price, $1.25.

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FOR SALE, THREE PAIR OF SUFFOLK PIGS, also a Suffolk Boar (10 months old) all full blood, on terms less than they can be purchased at the North. As this stock was selected by a gentlemen who is one of the most careful breeders of hogs we feel warranted in recommending it to the public as genuine.

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WE WOULD PARTICULARLY INVITE THE attention of those Societies, who are about to make up their Premium Lists, to our large collection of Agricultural Books, which are peculiarly adapted for Premiums.

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Terms per Sess on:

Board. washing, lights and fuel in rooms,	$60 00
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Music on Piano, Guitar, Melodeon, with use of instrument, each	23 00
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December, 1855.

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A new and singularly successful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousness, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but effectual Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the hearses all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characteras to forbid the suspicion of untruth.

Among the many eminent gentlemen who have testified in favor of these Pills, we may mention:

Dr. A. A. Hayes, Analytical Chemist, of Boston, and State Assayer of Massachusetts, whose high professional character is endorsed by the

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Also, Dr. J. R. Chilton, Practical Chemist, of New York City, endorsed by

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Wm. B. Astor, the richest man in America.

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Did space permit, we could give many hundred certificates, from all parts of the U States, which have been sent us, of evidence even more wonderful than the above, of the extraordinary efficacy of this truly eminent public benefactor in their cure of all

Pills, the result of long study and scientific research, and most confidently offered to the public, in the full belief that they possess virtues superior to any Pill which has been made known to the public. They are entirely free from Mercury or any other mineral substance whatever, but are purely Vegetable, being made of the extracts of Roots, Herbs, and Barks, the medicinal properties of which are fully developed and rendered more active by a chemical process, which I have adopted for the purpose of extracting the active principles from the various substances employed in the cure of disease. The combination of ingredients of which these Pills are composed is the result of many years of careful investigation and study, and I have the satisfaction to know that they have performed cures which seemed almost miraculous, even to myself. They are compounded from the Extracts of Vegetables, but the medicinal virtues of the Vegetable remedies, extracted by my process, are concentrated in a state of purity, and combined in such a manner as to ensure the best results. The system of composition for medicines has been found in my Cherry Pectoral and Pills both, to produce a more powerful remedy than had hitherto been obtained by any process. The reason is perfectly obvious. When by the old mode of composition, every medicine is loaded with more or less of acrimonious and inert qualities, by this each individual virtue only is obtained, the desired for the curative effect is presented, while the inert and obnoxious qualities of each substance employed are left behind, the curative virtues being retained. Hence it is self evident the effect should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

As it is frequently expedient that they should be taken under the counsel of a Physician, and as he could give proper directions for a remedy without knowing its composition, I supply the accurate Formula by which Dr. Ayer's Pills are made to the whole World. Price of the United States and British Provinces. If, however, these should be received them, they will be promptly forwarded as usual to his address.

Of all the Patent Medicines that are offered, how few would be taken if their composition was known. Their life consists in their mystery. I have no mysteries

The composition of my preparations is laid open to all men, and all who are competent to judge on the subject freely acknowledge their convictions of their intrinsic merits. The Cherry Pectoral was pronounced by scientific men to be a wonderful medicine before its effects were known. Many eminent Physicians have declared the same thing of my Pills, and even more confidently, and are willing to certify that their anticipations were more than realized by their effects upon trial.

They operate by their powerful influence on the internal viscera to purify the blood and stimulate it into healthy action—remove the obstructions of the stomach, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wherever they exist, such derangements as are the first origin of disease.

Being sugar wrapped they are pleasant to take, and being purely vegetable, no harm can arise from their use in any quantity.

For minute directions, see wrapper on the Box.

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By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed, with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached to it. It is a cheap safe, and certain protection against danger. It can be attached to old or new vehicles.

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Februsry, 1856. tf.

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The subscriber is general agont for the sale of Agricultural Implements and Farming utensils, Field seeds, Fertilizers, &c. &c. Almost all the nrticles brought to tho late Fair are kept on sale and are offered at manufacturers prices with no cost of transporiation, as they were brought free hy the Railroad.

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Hoe & Co.'s Warrented Circular and other Saws; Patent Leather Banding; Best Bolting Cloth; Mill Machinery; Mill Stones; Water Wheels; Premium Georgia Cotton Gins, and GinGearing, &c., &c., &c., all of which will be furnished on the most liberal terms by WILLIAM H. OLIVER & CO.

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FARMING IMPLEMENTS.

Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrougbt Irou Plows, and Plows witb wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete nssortment of tbe most approved Farming aud Horticultural Implements, of good quality and at low priees.

For sale by R. L. ALLEN,
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DR. STRONG'S COMPOUND SANATIVE PILLS

These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints, Chills and Fever, Dyspepsia, Costiveness, Liver Complaint, Jaundice, Sick Headache, Scrofula, Salt Rheum, Fevers of all kinds, Loss of Appetite, Obstructed and painful Menstruation, and all lingering diseases.*

As a Female Medicine they act like a charm, and when taken according to the directions, they never fail to cure the worst cases of **Piles,** after all other remedies fail.

They purify the blood, equallze the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action: and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

Also

DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds, Catarrh, Bronchitis, Croup, Whooping Cough, Asthma, Consumption, Nervous Diseases, Dyspepsia, Costiveness, Erysipelas, Disease of the Heart, Inflammation and Pain in the Chest, Back and Side, and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food, in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant, Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups, Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capable of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regular Appetite, and Strengthen the System.**

Price 25 cents per box, containing 25 doses of Medicine.

Call on the Agents who sell the Pills, and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of cures.

Both kinds of the above-named Pills are for sale in

Every Town and Village in North and South Carolina.

And at Williams & Haywood, Raleigh, N. C.
May 1855. 3—

GREENSBOROUGH MUTUAL INSURANCE Company. The cost of Insurance on the Mutual plan is but a small sum, compared with a joint stock company. This company being located in the Western part of the State, consequently much the larger portion of the risks are in the West, very many of which are in the country.

The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President.*
S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney.*
PETER ADAMS, *Sect. & Treasurer.*
W. H. CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf.

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assured for life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $80, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

SLAVES are insured for a term of from one to five years, for two-thirds their value.

All losses are paid within 90 days after satisfactory proof is presented.

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WM. D. HAYWOOD,	WM. D. COOKE,
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H. W. HUSTEN,	WM. H. JONES,
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RICH'D. B. HAYWOOD, M. D. } *Consultation.*

R. H. BATTLE, } *Executive Com-*
W. W. HOLDEN, } *mittee.*
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Communications should be addressed, (post paid) to
JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA

MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

OFFICERS OF THE COMPANY.

President.
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*

John R. Williams, }
T. H. Selby, } *Executive Committee.*
C. W. D. Hutchins, }

This Company has been in successful operation for more than 7 years, and continues to take risks upon all classes of property in the State, (except Steam Mills and Turpentine Distilleries,) upon favorable terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Country risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured

The average cost of Insurance upon the plan of this Company has been less than one third of one per cent. per annum, on all grades of property embraced in its operations.

All communications in reference to insurance should be addressed to the Secretary, post paid.

J. C. PARTRIDGE, *Sec'y.*

Raleigh, June 9th, 1856.

JOHN N. GORDON,

Grocer and Commission Merchant and Dealer in Metals,

14th Street, near the Exchange Hotel,
RICHMOND, VA.

May, 1856. 3.—tf

PIANOS, MELODEONS, AND MUSIC.

THE CASH SYSTEM ADOPTED! PRICES GREATLY REDUCED.

HORACE WATERS,

No. 333 Broadway, New York.

AGENT FOR THE BEST BOSTON AND NEW YORK INSTRUMENTS

THE LARGEST ASSORTMENT OF PIANOS, Melodeons, Musical Instruments, and Musical Merchandise of all kinds, in the United States. Pianos from ten different Manufactories, comprising those of every variety of style, from the plain, neat and substantial 6½ octaves, in Walnut or Rosewood Cases, from $150 to $200, to those of the most elegant finish up to One Thousand Dollars. No house in the Union can compete with the above in the number, variety, and celebrity of its instruments, nor in the Extremely Low Prices at which they are sold.

Horace Waters' Modern Improved Pianos,

With or without Iron Frames, possessing in their improvements of over-strings and action, a length of scale, power, and compas of tone equal to the Grand Piano, united with the beauty and durability of structure of the square Piano. They are justly pronunced by the Press and by the first Musical Masters to be equal to those of any other manufacturer. They are built of the best and most thoroughly seasoned material, and guaranteed to stand the action of every climate.

Each Instrument guaranteed to give satisfaction, or purchase-money refunded. Second-hand Pianos at Great Bargains, constantly in store, price from $30 to $140.

HORACE WATERS' MELODEONS, superior Instruments in tone, touch and durability of make. (Tuned the equal temperament.) Melodeons of all other styles and makes. Price, $45, $60, $75, $100, $125, $140; double Reeds, $150; double Reeds and two banks of Keys, $200. Less a liberal discount. Clergymen and Churches, an extra discount.

MARTIN'S GUITARS, *Brown's Harps, Flutes, Flutinas, Accordeons, Violins*, and Musical Instruments of all kinds, at lower prices than ever before offered to the public. A large discount to Teachers and Schools. The trade supplied on the most liberal terms.

MUSIC:—One of the largest and best selected catalogues of Music now published, comprising many of the choice and most popular airs of the day, and will be sold at one third off from the regular prices.

Music sent by mail to all parts of the country, post paid. Particular and personal attention paid to all orders received by mail. Satisfaction guaranteed in every instance. Pianos and Melodeons for rent, and rent allowed on purchase. Pianos and Melodeons for sale on monthly payments. Second-hand Pianos taken in exchange for new. General and select Catalogues and Schedule of prices forwarded to all parts of the country by mail.

☞ *Great Inducements offered to Agents in all parts of the Country, to sell the Horace Waters' Pianos, Melodeons, and Catalogue of Music.*

TESTIMONIALS FROM PROFESSORS, AND OPINIONS OF THE PRESS.

Horace Waters, Esq., 333 Broadway, New York:

Dear Sir,—Having examined your Piano-Fortes from scientific and appropriate tests, I am enabled to form a satisfactory judgement of their merits, and it is with pleasure that I can speak of them as among the most celebrated and improved makes of the day.

For Power, brilliancy and richness of tone, elasticity of touch, and beauty of finish, they will not suffer in comparison with those of any other manufacturer, and those desirous of obtaining a really good Piano-Forte—one that will prove an equivalent for their means, will find such a one in your beautiful instruments.

THOMAS BAKER,
R.A.M. Leader of Jullien's Band, and Musical Director and Conductor at Niblo's Garden.

Pianos and Music.—We learn that Horace Waters, of 333 Broadway, N. Y., agent for the sale of many of the most celebrated makers of Pianos and Melodeons, is offering them at prices which we advise all who desire to purchase to avail themselves of. He is also selling his large and well known Catalogue of Music at one-third off from the regular prices, and will forward the same free of postage. His offers to the trade, teachers, and schools, are of the most favorable character—all of which he will he able to fill to the letter, for having wisely adopted the cash system. The Horace Waters' Pianos are known as among the very best. We are enabled to speak of those instruments with some degree of confidence, from personal knowlege of their excellent tone and durable quality.—*N. Y. Evangelist.*

The treble is clear, pure, powerful, and very melodious, the base is deep, rolling, and sonorous; the middle part is rich, and sympathetic, and possesses the power of singing, *i. e.* of uniting the sound of each tone, in a degree but rarely achieved.

Henry C. Watson.

September, 1856. 7—tf.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. COOKE, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

EXECUTIVE OFFICE,
Raleigh, Jan. 26, 1856.

MR. WILLIAM D. COOKE has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

DEAR SIR:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
January 26th, 1856. WILL: A. GRAHAM.
WM. D. COOKE, ESQ.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

N. B.—The copartnership heretofore existing between W. D. Cooke and Samuel Pearce in the proprietorship of the Map has been dissolved by mutual consent.

WILEY'S NEW FORM BOOK.

A NEW AND PRACTICAL FORM BOOK, containing forms of all those Legal Instruments important to be known by the People of North Carolina and designed for the use of *Justices of the Peace, Sheriffs, Clerks, Constables, Coroners*, compiled and arranged by C. H. WILEY, Esq., to which are added the Constitutions of North Carolina and of the United States. Published by Wm. D. Cooke, Raleigh, N. C.

Any person enclosing One Dollar in a letter, or that amount in Postage Stamps, will receive by return mail a copy of the work *free of postage. Be very careful to send for* "Wiley's New Form Book" and address WM. D. COOKE, Raleigh, N. C.

April, 1856.

THE NEW HOTEL,

WELDON, N. C.,

IS NOW OPEN for the reception of visitors. This Hotel is new and newly furnished, and the Proprietors will use every effort to keep a GOOD HOUSE, and render their guests comfortable.

They respectfully solicit a share of public patronage. T. J. JARRATT & Co.
Proprietors.

MEALS always ready on the arrival of the cars.
July, 1855. 33—tf.

WHITFIELD'S HOTEL,

WELDON, N. C.,

JOHN SMITH, Jr., Proprietor,

Formerly of Charleston, S. C.

MEALS, FIFTY CENTS.

Left hand side going South---Right hand side going North.

August 18, 1855, tf.

THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WM. D. COOKE, Publisher. B. S. HEDRICK, Agricultural Editor.

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Miscellaneous.

Destroying Pernicious Insects.

T. Glover, the distinguished entomologist, connected with the Agricultural Department of the Patent Office, has lately furnished the National Agricultural Society with a most interesting essay on destructive insects and birds; and he enjoins our farmers to study their habits. He says:—

"A close study of the habits and transformations of any one of the pernicious insects (ball worm, wheat midge, caterpiller, &c.,) by the practical and intelligent farmer would prove not only a source of great pleasure, as leading him to a keener sense of the beauteous and wonderful works of nature, as exemplified in the singular transformations insects undergo, before they assume the perfect or fly state, but also a source of great profit, as by experimenting upon them in all the stages of their existence he might perchance discover some practical method by which their extermination could be effected. Indeed it is absolutely necessary that a farmer should be able to recognize the insects that destroy his crops, in all their various and wonderful transformations, before any effectual remedy can be applied; as in one stage of their life they may be suffered to live and enjoy themselves, nay, even sometimes be protected; whilst in another stage we persecute and destroy them by every means in our power. For example, the beautiful butterfly of the *papilio asterias*. A humane and kind-hearted farmer unversed in entomology, who should see his children chasing and killing the beautiful black and yellow spotted butterfly that was flitting joyously over his vegetable garden, in the spring or early summer, apparently leading a life of mere harmless pleasure, would, no doubt, reprove them for wantonly destroying such a pretty, harmless insect; and if the truth was known, this pretty and much to be pitied insect is the parent of all these nauseous smelling green and black spotted worms that later in the season destroy his parsley, celery, parsnips, and carrots. Yet by merely crushing the parent fly at one blow

early in the season, before it has deposited its eggs, he would be spared the vexation of either seeing his plants devoured and seed destroyed, or having the disagreeable task of picking off, one by one, some hundreds of caterpillars later in the season. This fact will be more apparent when I state how incredibly fast some insects multiply, especially in the warmer climate of the South, where there is little frost to destroy vegetable life, and there are several generations in one season. Dr. John Gamble, of Tallahassee, Fla., assisted by myself, dissected a female ball worm moth or miller (an insect. which in the caterpiller state is most destructive to cotton,) and we discovered a mass of eggs, which when counted amounted, at the least calculation, to five hundred, duly hatched, for the first generation, say one-half males, the rest females, the second generation, if undisturbed, would amount to 125,000 and the third be almost incalculable.

Now, these mother flies are not very numerous early in the season, owing to the birds devouring them, the rigor of winter, and various other accidental causes, and if practical means were found to destroy them as early in the spring as possible, the immense ravages of the second and third generations might be prevented. In one female (œcetieus) case or hangworm so destructive to the shade trees, I counted nearly eight hundred eggs, although the specimen was but small. Now, were all these cases taken from every infected tree in the winter, when they can more easily be seen, owing to the fall of the leaf, and then immediately burned, the trees would be comparatively free next season; and by following this plan for one or two years more, the work growing gradually less and less, the insect might finally be exterminated, inasmuch as the female never leaves her case, but forms her nest of eggs inside; and yet these noxious pests are suffered year by year to increase, when so little trouble would destroy them.

Other insects, again, have other habits which, if fully known, would likewise lead to their destruction."—*Goward's Register.*

Lime on Clover.—One of our agricultural exchanges contains a communication from a farmer who recommends sprinkling clover that has been cut and partially dried with lime slackened to powder, when it is put into the barn.

The writer says that he has repeatedly tried it, and the result is the clover comes out in the winter in good condition, and that cattle eat it readily, and thrive well upon it. It is a mode new to us, but it may be useful to know it.—The lime must act as an absorbent, and take up the superabundant moisture of the hay, and thus prevent its heating and fermentation,—*Goward's Register.*

Facts for Farmers.

Mutton can be produced, pound for pound at less than half the price of pork; it yields more nourishment when eaten, and keeping sheep does not exhaust a farm to the extent feeding hogs does. Sheep can be kept through the winter on hay or turnips, or mangel wurtzel, or sugar beet, while hogs will not do without at least some corn.

Land planted with corn without manuring it does not yield half the crop it would if manured, while raising corn on nearly all the farm wears out the land, wears out the men and horses, and farm implements, and while doing all this, returns but a comparatively small amount for labor, and will eventually make that man poor who practices it.

The most economical and nourishing food for a family, in the winter, is white beans or white peas, the latter of which can be kept free from bugs by shelling or thrashing them when ripe, and then immersing them in scalding hot water for about one minute, which while it destroys the egg that produces the insect, does not injure the vitality of the pea.—So says the Patent Office Report for 1849.—Peas thus treated can be spread on a sheet and dried by the heat of the sun, and one bushel of them will, I know by experience, go as far in a family as a barrel of flour.

Cows fed during the winter, on any kind of moist food, as potatoes, turnips, or other roots will give more milk than if fed on hay or corn or anything else of a dry nature.

It would be to the advantage of farmers to confine their attention exclusively to the farm and let all speculating business alone; for, if farming is worth following at all, it is certainly much better to attend to it well than to have the mind divided between it and some other

bject. It is best, moreover, for farmers to ise crops of every variety that their land will roduce which are saleable in their vicinity; or by following this plan if one crop fails, or s not so much in demand, some other will robably be found to compensate the loss.—*Coward's Register.*

Fall Plowing.

The advantages of Fall Plowing may be enuerated as follows:

1. In autumn, the team having become inred to work through the summer, is more vigrous and better prepared for labor than in the pring, and other farm work is less pressing in s demands upon the time and attention than n that bustling period. Let all the plowing be one which is possible in the fall, and still the pring work would give abundant employment o the farmer and his teams, in drawing maure, cross-plowing, cultivating, harrowing, c.

2. In the fall, low, moist lands are generally n better condition for plowing than in spring ime. We say generally, for this season low, noist lands are decidedly moist, at present. till, we cannot hope for any better state very arly next year, and if plowed as they should e, wet lands will suffer very little from water hrough the winter.

3. Stiff, heavy soils, plowed in autumn, unergo, by the action of water and frost, a more horough disintegration—clays are pulverized nd crumbled, and heavy loams and hard pan nds are acted upon in a like manner and with ke benefit.

4. Heavy, coarse swards, full of rank weeds nd grasses, can be better subdued by plowing the fall—their roots are more apt to die out, nd far less liable to sprout again than when lowed in the spring. The turf is better preared, by its more advanced state of decay, for he use of the crops which may be sown or lanted upon it.

5. Fall plowing disturbs the "winter arngements" of numerous worms and insects, nd must destroy a large number of these ests, and also their eggs and larvæ. This is minor advantage, but one worthy of considration, especially on lands infested with the ire-worm.

The principle objection to fall plowing are these:

1. The loss of that fresh friable condition readily permeable to air and moisture, and the consolidation of the soil by long exposure to changing and stormy weather. This, on soils of a light character, is a very serious objection to plowing in autumn.

2. The loss of vegetable matter and the gases to the same while in a state of decay, is another disadvantage. The latter is but a small loss, if the work is done late in the fall, but often, on hill sides, a large part of the soluble and floating organic matter is washed away by the heavy rains of winter and early spring time. The soil is also consolidated by the same influences. Heavy swards thus situated would sustain less injury than light swards or stubble lands.

The advantages and disadvantages of this practice may be appropriately followed by brief directions for performing the work.

1. Do it in the best manner.

2. Throw up low lands in narrow beds and cut cross furrows and drains sufficient to carry off at once all surface water. This will obviate one great objection to fall plowing.

3. Plow deep and narrow furrows—such will best secure the action of the ameliorating influences of frost upon the soil. A rough broken surface is better than a smooth one for this purpose.—*Rural New-Yorker.*

To take stains out of linen.—Stains caused by acids can be removed by wetting the part and laying it on some salt of wormwood; then rub without diluting it with more water.

Or, tie up in the stained part some pearlash, then scrape some soap into cold soft water to make a lather, and boil the linen till the stain disappears.

Recent stains of fruit may be removed by holding the linen tightly stretched over a tub and pouring hot water over the part. This may be done before any soap has been applied to it. As soon as the stain is made on table linen, &c., rub on it common table salt, before it has had time to dry. The salt will keep it damp till the cloth is washed, when the stain will disappear; or, wash the stain lightly when the cloth is removed.

From the Rural American.

Good and Bad Plastering.

Mr. Editor.—A rainy day, and one of the delays incident to Western travelling, give me an opportunity to write a few lines for publication. It was my good fortune to meet with a copy of your excellent paper here; and as it abounded in timely hints on various subjects, I thought I would forward to you a few notions of my own on plastering. Don't think, sir, that I am joking with you, and am bent on plastering anybody with praises they don't deserve. I wish to speak of *bona fide* plastering with mortar made of good sand and lime, and, perhaps, a little hair, for sake of consistency.

Why, sir, let me ask, is it that we have such poor plastering now-a-days throughout the country? With whom does the fault lie?—From my own observation—and that has been extensive—I think that mechanics, especially in the country, put on their lath too closely together. Their object, I suppose, is to save material; for a very thin coat of mortar serves to cover such lathing.

Now, as an honest mechanic, myself, I protest against such work, and for the following reasons:

1.—When laths are nailed very close together—and I have often seen them only an eighth of an inch apart—there is no room left for the mortar to form a clinch.

2.—What little clinch is formed, is in most cases destroyed by the swelling of the lath, caused by the dampness of the mortar, which cuts the clinch off. And then, when the walls become dry, the lath shrinks and the clinch is consequently broken, and the wall is more or less cracked.

Now, what is the remedy for all this? I will venture a few suggestions: First, get good 1 1-4 inch, or 1 1-2 inch sawed lath, about one-fourth of an inch thick, nailed on with fine three-penny Fall River lath nails, put on about three-eighths to one-fourth of an inch apart, or so that you can put the end of your fore-finger between each lath. Then take one part of fresh lump lime to two parts of clean, sharp sand, and a sufficient quantity of long cattle's hair: let them be well mixed and slacked, and then cover your lath with one good coat of the above, well crowded in; then scratch or broom the same, and let it get thoroughly dry. Afterwards, take one part of fresh lump lime to three parts of clean, sharp sand, with a suitable portion of short cattle's hair mixed for a second coat. Lay this on straight and smooth and properly hand-plastered. When nearly dry, take a little slacked lime and trowel your walls down smooth. They will then be ready for whitewashing and papering. They will remain firm and smooth for many years.

I advise all rural Americans and city Americans likewise, to try this plan, and I know they will approve of it. The universal Yankee nation in some things is altogether too fast; and not the least so, in building its walls. At another time I may say something about laying foundations; but just now, I speak of walls.—Let them be built slowly, honestly and firmly, they will then bear examination, and they will last. But, dropping all figure, let me close by insisting that laths should be put on wide enough to ensure a good clinch, and that the mortar be put on as I have said. Of two evils give me wide lathing and poor mortar, rather than good mortar and close lathing.

Yours, respectfully,

Geo. R. Jaques.

St. Joseph, Mich., June, 1856.

How to Make No-Matters.—This is an article of food which has for many years been confined to the descendants of a single family. Its excellence will commend it to the attention of those housewives who wish to make a good display of culinary skill upon their tables, at the same time having a due regard for economy. The lady who furnishes the receipt has given frequent opportunities of testing their delicious flavor, and if any are inquisitive, perhaps she might be indnced to inform them how the cakes obtain their homely name. "To three teacupfulls of buttermilk, add three tablespoonfulls of rich cream and a small quantity of sugar. Stir in flour until it is of the consistency of paste for doughnuts. Roll out size of a large breakfast plate, and fry in lard to a rich brown color. As each cake comes from the fire, cover with apple-sauce made from tart apples sweetened to taste, and spiced with nutmeg or cinnamon, and continue the process till the plate is well heaped."

The most intolerable creatures are those scribblers who daily pester the world with their insufferable stuff.

Preserving Shingles on Roofs.

The following article we copy from the Rural Intelligencer, as worthy of attention by those who desire to preserve the roofs of their habitations and buildings—

"Some paint roof-shingles after they are laid. This makes them rot sooner than they otherwise would. Some paint the courses as they are laid; this is a great preservative, if each shingle is painted the length of three courses.

But as sure a way to preserve shingles, and that with little or no expense, is a mode recommended in a letter to us by Hon. David Hunter, of Clinton, on the 23d of February last.—We publish so much of this letter as relates to this subject, in hopes that it may be of service to many of our readers:—

'There is one thing more that nearly all people know, if they would only attend to it; that is, to sprinkle slacked lime on the roofs of their houses in rainy days. Put it on considerably thick, so as to make the roof look white, and you will never be troubled with moss, and if the shingles are covered ever so thick with moss, by putting the lime on twice, it will take all the moss off and leave the roof white and clean, and will look almost as well as if it had been painted. It ought to be done once a year, and in my opinion, the shingles will last twice as long as they will to let the roof all grow over to moss. I tried it on the back side of my house, ten years ago, when the shingles were all covered over with moss, and they appeared to be nearly rotten. I gave the roof a heavy coat of lime, and have followed it nearly every year since, and the roof is better now than it was then, to all appearance; if I follow my hand it will last ten or fifteen years longer. The shingles have been on the roof over thirty years.' There is no more risk about the sparks catching on the roof than on a newly shingled roof. Those that do not have lime near by, use good strong wood ashes, and these will answer a very good purpose to the same end.'"

The action of the lime is to cleanse the surface of all impediments to the free and rapid passage of the rain-water off. This enables the shingles to dry very soon, and consequently prevents rotting. Moss-covered roofs will rot very rapidly.

A Wrinkle about the age of Horses.

A few days ago we met a gentleman from Alabama, who gave us a piece of information in regard to ascertaining the age of a horse, after he or she has passed the ninth year, which was new to us, and will be, we are sure, to most of our readers. It is this: after the horse is nine years old, a wrinkle comes on the eyelid at the upper corner of the lower lid, and every year thereafter he has one well defined wrinkle for each year of his age over nine. If, for instance, a horse has three wrinkles, he is twelve: if four, he is thirteen. Add the number of wrinkles to nine, and you will always get it. So says the gentleman; and he is confident it will never fail. As a good many people have horses over nine, it is easily tried. If true, the horse dentist must give up his trade.

We believe the best judges have a rule, which they rely on as infallible to the age of fourteen. The horse has six incisors, "nippers," as they are commonly called—the front teeth. They have such a dent in them just like the dent in gourd seed corn, and are hence called gourd seed. At four years old, the front pair at bottom lose the gourd seed, become smooth; at six the next two—one on each side; at eight, the next pair, which completes the bottom sett. At ten, the front upper pair becomes smooth; at twelve the next pair; at fourteen the last pair. After this the "wrinkle" may come into play.

Another indication upon which we are told the late Wm. R. Johnson relied, to ascertain the age of the horse, was an inspection of the termination of the lachrymal duct, which opens into the *septum*, or cartilaginous division of the nose on each side, an inch or two above the nostril. Any one on examination will easily find these orifices; but it requires a good deal of practice and a nice eye to apply this test.—It is said that it enlarges with the age of the animal.—*Southern Farmer.*

Egyptian Alabaster.—The Egyptian Government having, of late years, opened up some rich quarries of Oriental alabaster, great quantities are now being sent to Italy for the purpose of making vases. The color of this alabaster is very beautiful, and it is very translucent.

The Great Agricultural Exhibition at Philadelphia.

The Philadelphians are wide awake in regard to the exhibition of the United States Agrienltural Society, which takes place in that city next month. The local committees are straining every nerve to have the exhibition excel that held in Boston last year. The following paragraphs from the Philadelphia Inquirer give some idea of the extent of the preparations made for the exhibition:

"The preparations for this exhibition at Powelton, Twenty-fourth Ward, are progressing rapidly. A very large number of workmen are employed. A large portion of the fenciug has been already put up. The grounds within the enclosure embrace an area of about fifty acres, reaching nearly to the wire bridge on the north, and upon the south taking in the ravine and the old cemetry near the Fairmount bridge. Upon the east, the fence runs along the high water line, taking in the river road, and using up the former camping ground.—A public road, thirty feet in width, will be left on the West of the enclosure between the latter and the Pennsylvania Railroad.

The ground will be double in extent that of the State Fair two years since. Many of the sheds are nearly finished, and they present quite a picturesque appearance with their gable ends jutting toward the fair grounds.—There will be stalls provided for twelve hundred cattle.

A prominent feature of the ground is the course for the exhibition of horses, near the southern end. The track will be nearly level, and great care is taken to adapt it for the purpose for which it is designed. The ring is half a mile in circumference, and near it there will be a stand erect that will accommodate eight thousand spectators. Inside this ring the tent of President Wilder will be located. The tents for the different departments of the exhibition, for the officers, for the banquet, and for the use of the Reporters for the Press, will occupy appropriate places on the grounds. Some idea of the extent of the buildings to be erected may be formed from the fact that in addition to the tents and marquees, over half a million feet of lumber will be required in putting up the necessary temporary structures.

The entrance to the grounds will be at the northern and southern extremities of the area, and the exit gates will be located on the western.

The exhibition will commence on the 7th of October. The Butchers' Association intend to celebrate the event by a grand parade, for which active and extensive preparations are making."

Loss of Weight in Curing Hams.

Bordley in nis work on husbandry, gives the following memoranda, showing the loss of weight in the curing of hams:

Dec, 2*d*, 20 of my family hams, trimmed, weighed green,	*lbs* 221, or each,	*lbs.* 16 6-10
June 30*th*, They weighed when full smoked,	256, "	12 8-10
Evaporation,	65	3 8-10

The l ss of weight 20 1-2 per cent. or about 1-4.

Dec. 22*d*. A Tenant's hams, two weighed green and trimmed,	*lbs* 31	
Aug. 11*th*, The same when smoked,	26	
Evaporation,	5 or 16 per cent.	

The price of hams in the Baltimore market exceeds about 100 per cent. the price of pork, taking the hog round.—*American Farmer.*

Plant from the Best.—A Virginia farmer in sending some fine corn to the Agricultural Office at Washington, says: "I have for twenty years saved for seed the top ear of the stalks that bear two and three ears apiece, and have in this manner improved the corn." This corn is said to make a fine, white meal, and a most nutritious bread, which is much relished by all who have partaken of it. The method adopted is worth the attention of our friends.

Small Farms.—We desire to impress on the common-sense reasoning of every man, the paramount importance of having no more land in cultivation than can be well cultivated. By no means attempt to manage more than one can manage well. Be a Farmer, not a mere earth scraper, lazily scraping up sufficient earth to destroy the face of the soil, and throw seed away, or you will always have to scratch hard for a living. But make your farm a source of pride, and it will surely become a source of profit.—Make the object to be not to have many but rich acres.

Manufacture of Soap.

Pure white soap is composed of fatty acid, an alkali, and water. In 100 parts of soap there are 63 of fatty acid, 6 1-2 of alkali and 30 1-2 of water. The process of making hard soap is not so simple as that of soft soap. White or curd soap is made of the finest tallow or suet only, and boiled to a thicker consistency than other soaps upon a stronger alkaline lye, and before it is put into the frame to cool it requires "crutching." This consists in stirring it about in an intermediate vessel between the boiler and the cooling frame, to break and mix the curd.—Nothing but the best materials are used for this soap.

All our common brown soaps contain resin.—Colophane or resin is soluble in a caustic alkali, hence its adaptability to increase the quantity of our common soaps Its use is so common, and as it produces a lather with water it is not generally held to be an adulteration, still it does not produce proper saponification. The quantity required to make a ton of perfect soap is 1,540 pounds. From eight to ten per cent. of this fatty acid is converted into glycerine, and owing to the limited use made of this substance it may be called waste.

The most convenient and cheap alkali for manufacturing soap is sal soda—the carbonate of soda manufactured from common salt. It will not make soap by boiling it direct with grease, as it contains too much carbonic acid; it must be prepared for use by dissolving it in about five times its weight of water, then adding half its weight of fresh slacked lime. The carbonic acid leaves the soda, unites with the lime and forms chalk, which sinks to the bottom of the vessel. The clear liquor is caustic lye, fit to be boiled with tallow, oil or fat, to make soap. In soap works, the soda lye is deprived of its carbonic acid in vats prepared for the purpose; but any person may make hard soap from soda lye, by a very simple apparatus, viz: a wash tub, and a small tin or iron boiler,

It is not our intention to give a full description of the processes for manufacturing soaps on a large scale; our "Notes" are general on points where information can easily be obtained, but *particular* respecting some things that are not so well known.

The most recent work published in our country on Soap and Soap making is that of Campbell Morfitt, by Parry and McMillan, of Philadelphia—a good treatise. Another work, and a very excellent one also, is that of Kurten, being a translation from the German, published by Lindsay & Blakiston, Philadelphia. Different soap-makers employ different methods of working; and we know one not many miles from New York city, who pursues the methods described in Dr. Ure's old Dictionary of Chemistry, published in 1823.

Soap making is not an art which has undergone much improvement for many years. Tallow, suet, lard, oils, resin, fat from deceased animals, and boiled bones, are the most common materials employed in soap making. It has been proposed to make soap from cotton seed oil, and we have a sample of such soap in our possession; Edward Conklin, of Cincinnati, has made soap direct from the seed, and there are some prospects of his being successful in its manufacture on a large scale.

In England, palm oil is now extensively employed for making soap; 40,000 tons of this substance is consumed annually for this purpose, and the consumption of it is increasing rapidity. It is obtained from Africa, and is an economical material. Fish oil and vegetable oils of every description can make soap by being boiled with caustic alkali, and thickened, if required, with salt. A grand discovery in the manufacture of hard soap would be the saving of the glycerine by combining it with the soap.

Fancy Soap.—Those small cakes of perfumed soaps used for the toilet can easily be manufactured by dissolving common bar soap of any kind, and adding perfumed ingredients and coloring matter—if the latter are desired. The bar soap is cut up into thin slices, placed with a small quantity of water in a pan over a fire, and is stirred until it is reduced into a paste. The perfumes are then added, well stirred, and the soap run off into a flat frame or dish, and set in a cool place. In the course of three days it is fit to be cut into cakes and stamped with any ornamental figure or name. In establishments for conducting the manufacture of these soaps, the heating is performed in a steam bath, and machinery and apparatus are employed for conducting the business with facility and economy.

Almond Soap.—This is perfumed with two pounds of the otto of almonds added to one

hundred and twenty-eight pounds of dissolved bar soap. The heat should be as low as possible.

Camphor Soap.—This is made by adding 1 1-4 pounds of otto of rosemary and the same amount of otto of camphor to 28 lbs of dissolved bar soap.

Brown Windsor Soap.—This soap has a distinguished reputation, and sells at retail for 25 cents per pound. It is made by adding half a pound each of otto of caraway, cloves, thyme, cassia and lavendar to 168 lbs. dissolved bar soap. Its brown color is produced by roasted sugar—caramel.

Various soaps can be produced according to the perfumes employed to give them their peculiar odor. Some of the fragrance, however, is always lost by adding the volatile perfumes warm; therefore another method to produce scented soaps is to add the odoriferous ingredients cold. This is done by shaving bar soap in very thin slices, pounding them in a mortar with a very small quantity of cold soft water, adding the perfumes, and triturating well with the pestle. When well triturated the soap is taken out and pressed into any desired form of cakes in mounds, and then set to dry in a cool place.

A very fine fancy soap is thus made by adding to 6 lbs. of soap shavings, 8 oz. of oil of citron, half an oz. of the oil of bergamot, and 2 oz. of the oil of lemons. This is an expensive but excellent toilet soap.

Transparent soap is made by dissolving pure tallow or oil soap in alcohol, then allowing it to dry in a warm situation. The soap is added to the alcohol in fine shavings, and after being dissolved it is formed into cakes or balls, as may be desired. Any kind of perfume may be added to the transparent soaps in the alcohol,

Medicated Soaps.—Septimius Pease has stated that he made a series of experiments with soaps, by medicating them with sulphur, iodine, bromine, creosote, &c. These substances were added to the soap while cold. He believes they might be of service in the treatment of some diseases, but does not speak of their effects positively. Sulphur combined with soap has been found very useful for skin diseases caused by insectoria. It is employed in the warm bath, and is found to be very effectual.—*Scientific American.*

Come to the State Fair, and bring something.

Washing Clothes.

Messrs. Editors:—I noticed in the "Country Gentleman," of June 5th, an inquiry about washing clothes and washing machines. I have never used any machine but the primitive one, which, I suppose, has been in use ever since clothes were washed; so I cannot speak from experience about other machines. But I have used for several years a washing fluid, which very much lessens the labor of washing without injuring the clothes in the least. It is made as follows: take, for one gallon of water one pound of washing soda, and a quarter of a pound of unslacked lime. Put them in the water and simmer twenty minutes. When cool pour off the clear fluid into glass or stone ware, (for it will ruin earthenware, causing it to crack until it falls to pieces.) If the clothes are very dirty, put them in soak over night; wring them out in the morning; soap them and put them in the wash-kettle, with enough water to cover them. To a common sized kettle or boiler full, put a tea-cup-full of fluid. Boil half an hour, then wash well through one suds, and rinse thoroughly in two waters. Those careful housewives, who have always washed their clothes twice, then boil them and then wash them again, will think this a very superficial way of washing: but I know from experience, that my clothes not only wash easier, but look better, and last fully as long, as when I washed in the old way.

This fluid is very good for cleaning paint. A very little put in the water will remove grease or fly stains, much better than soap. Too much of it will remove the paint also.—S. S. Socwell. *in Country Gentleman.*

Packing Eggs to Keep.—One of the best ways of packing eggs to keep long, is to pack them in charcoal dust, in boxes the longest diameter perpendicular, set them in a cool dry place and turn the boxes over as often as once in two days. Try it, but do not set the boxes where they will be forgotten and the turning neglected. Where this attention would be too great an inconvenience, it will be found to answer an excellent purpose to pack the eggs in large earthen jars or crocks, and to fill them with lime-water made by pouring water upon quick-lime and letting it stand a day or two covered; it may be decanted without great care to pour it off clear. The lime deposits from the solution upon and in the pores of the shell and keeps the eggs prefectly sweet for a long time, even though the yolk settles down upon one side against the shell.

From the American Farmer.

A Selection

Of Twelve of the most Estimable Varieties of Strawberries.

BY WM. R. PRINCE, FLUSHING, N. Y.

Prince's Magnate, P, the largest variety yet produced in our country, rounded, and some berries compressed, scarlet, rich flavor, productive, and highly valuable. A very showy berry for market, and a very remarkable and distinct fruit. Plant, extremely hardy and vigorous, with large, broad, dark green foliage.—The leaves never burn during the summer, nor are the plants ever injured by the winter.

Prince's Climax, P, very large, conical, beautiful bright scarlet, a splendid fruit, good flavor, very productive, estimable; plant vigorous, with pale green foliage.

Imperial Scarlet, P, second only in size to the two preceding to which it is rather superior in flavor; the form obtuse, comeal or rounded, scarlet, handsome and very showy, juicy and sprightly flavor, firm and well suited for market—productive. Plant very vigorous, foliage pale green, very large and luxuriant, a remarkable variety, very valuable for the size and beauty of its fruit and for its other qualities. This, and the preceding variety, are of larger average size than Hovey's Seedling, and much superior in color and flavor, and consequently better suited for market.

Imperial Crimson, P, large, short cone or rounded, dark scarlet or crimson, fine color, sweet fine flavor, productive, a first rate berry, firm for market. It is nearly as large as McAvoy's Superior, and has the qualities for a market fruit in which that variety is so deficient.

Le Baron, H, early, very large, obtuse cone, dark scarlet, not showy, sweet, rich, melting, highest flavor of all the largo varieties, very productive for one of its sexuality, and continues long in successive bearing; foliage tall, light green, and very vigorous,—a seedling of the old Swainstone.

Suprema, P, very large, obtuse cone, bright light scarlet, a beautiful berry, juicy, sprightly, moderately sweet, very productive, foliage large and vigorous. A seedling from the Montevideo or Chili, and precisely equivalent to obtaining a Pistillate variety from the British Queen.

Rosalind, P, very large, obovate, beautiful light scarlet, moderate but good flavor, very showy, scarcely firm enough for long carriage to market, very productive; plant vigorous, with large broad foliage.

Eclipse, P, early, large, conical, splendid fruit on long penduncles, and has the remarkable property of ripening all its berries at the same time, bright scarlet, high brilliant color, fine flavor with slight acidity. It is one of the greatest bearers of all strawberries, and a full and profuse crop may be earlier supplied for the market from this variety than from any other. Plant vigorous with large foliage. A very striking and remarkable variety.

Ladies' Pine, P, medium size, perfectly round, beautiful light scarlet, very sweet, highest and most exquisite flavor, productive; foliage, dark green, as if varnished, vigorous growth, with large fruit stems. This most estimable fruit will be deemed indispensable by every amateur who once tastes it.

Magnificent, P, very large obtuse cone, light scarlet, good flavor, very productive, very valuable.

Diadem, P, very large and showy, rounded, beautiful light scarlet, pleasant flavor—a remarkably fine and beautiful berry; plant very robust, vigorous and hardy, with tall, light green foliage, very productive. A seedling of the Iowa.

Crimsoned Perfumed, P, large obovate or rounded, crimson, sweet, juicy, high perfumed flavor when fully ripe, very productive, valuable; foliage dark green.

Malvina, P, large, obovate, bright crimson, juicy, springhtly, good flavor, very productive. This variety greatly resembles Hovey's Seedling, its parent, both in the growth and foliage of the plant, and in the form of its fruit; but when contrasted, it is rather smaller, with the advantage that the berries are of a more average size, and less unequal than that variety; the color is a brighter red, the berries more juicy and of a more spirited and higher flavor, and it ripens fully a week or two before the Hovey, thus obviating the disadvantages of that variety. It is firm, and well suited for market; foliage dark green and luxuriant when in full growth. A grower who sent a considerable quantity to market the past season contracted for the whole at 31 cents per quart.

Composition and Formation of Steel.

At a recent meeting of the Boston Society of Natural History, Dr. Jackson gave an account of some researches into the composition and manner of formation of different kinds of steel. As commonly known, steel is a combination of carbon and iron, made by heating flat bars of pure iron in combination with charcoal. The carbon is first converted in oxide of carbon, and then unites with iron as a carburet. The result of this process is known as blistered steel, from the bubbles generated by gases upon its surface. Sheer steel consists of parallel plates of pure iron and steel welded by folding, and uniting the bars of blistered steel. Cast steel is fused in pots of the most refractory material, and differs from cast iron, which likewise contains carbon, in this respect, that cast iron is a mixture of coursely aggregated matters, graphite and iron, while cast steel is a chemical combination of carbon and iron.

From the researches of Berthier, it is known that manganese will form an alloy with iron. When iron is mingled with a considerable proportion of maganese, a steel of very fine quality is obtained, which has the advantage over carbon steel; carbon steel becomes coarse when tempered in thick masses, from segregation of the particles of carbon; but no such troubles arise with manganesian steel. Parties in England have lately introduced excellent wire for piano-forte strings made of this kind of steel, as well as for cutting instruments and for other purposes. In the wire, Dr. Jackson has found one and a half per cent. of manganese, and has established the fact that it resists, to a very remarkable degree, the action of hydrocloric acid. Sixteen years since, Franklinite iron was manufactured by Mr. Osborne into very hard and fine steel. This steel required tempering at a lower heat than carbon steel. Many of our manganesian irons might be manufactured into steel by the simple process of fusion, and a steel of uniform character might be made without previous cementation with carbon.—*Boston Historical Society.*

To whiten linen turned yellow.—Cut up a pound of fine white soap into a gallon of milk and hang it over a fire in a wash kettle. When the soap has entirely melted, put in the linen and boil it half an hour; then take it out, have ready a lather of soap and warm water; wash the linen in it, and then rinse it through two cold waters, with a very little blue at the last.

Attend to the Legs of your Horses.—Considering the important functions assigned to the legs and feet, upon which a great portion of the horse's value descends, it is a matter of surprise that more attention is not bestowed on the subject. There are many breeders who never think of inspecting them till the animals are about to be broken, or if they observe any imperfections, they leave the remedy to its fate. The legs of young horses may be justly compard to willow twigs, you may train them to almost what form you please. By careful and judicious treatment, many defects may be relieved or corrected, if attacked in the earliest stage, before the parts have assumed an unyielding texture. Many of the imperfections to which the form of the leg is susceptible, may be turned to a portion of the hoof having been broken, worn away, or clipped off. In the event of such accidents, the opposite side of the foot grows more luxuriantly, and the weakest portion, or lower side, having to sustain an increased weight, an uneven bearing of the foot is thus established. This will assuredly cause the leg to grow crooked, and very probably occasion a turning in or out of the toe.

The irregularity of the shape is often seen in one leg, while the other is well formed. The pastern joints, in many cases, evince a disposition to grow too upright, or on the other hand to assume too much obliquity. The same principle which accidentally causes a limb to take an unfavorable growth or form may be adopted to restore it to its proper shape, providing it is attended to in time. Thus, if the inside of the near fore foot of a colt or young horse be broken off or worn down, it will cause the animal to tread more heavily on the inside than on the out, and the leg will become bent in consequence. To correct this it is only necessary to reduce the superabundant portion of the foot with a drawing knife, or carp, so that the limb may have an even bearing. When the pasterns grow too upright, the heels require to be lowered; and the toes of those which are too oblique must be shortened. The texture of the hoof varies considerably in different animals. In some measure it is constitutional: and it is likewise affected by the state or condition of the land upon which the animal is reared.—*Mark Lane Express.*

Principles of Agriculture.

A paper was recently read before the Farmers' Club of New York, by Dr. R. L. Waterbury, which seems to have conflicted with the views of the savans of that illustrious body, consisting of Messrs. Mapes, Waring, *et id omne genus*, who undertook to answer it. On reading the report of their remarks, Dr. W. found it necessary to disclaim the views attributed to him, and in doing so gives the purport of the paper read by him as follows:

That without the use of any foreign fertilizer, produce enough may be sold off from a farm in most portions of the Union to pay the expense of conducting it; and yet, by judicious management, the soil may be annually improving in condition;

That this can be effected easiest in those portions of the Union where the value of land is the least, and where, consequently, the farms are largest, and the longest rotations of crops can be profitably resorted to;

That no system of farming is deserving of our attention that does not recognize the necessity of farm exports;

That a State may, to some extent, export agricultural products, without diminishing in capability to produce them;

That an inspection of the census returns of the United States, and of the State of New York, shows that the amount of crops of this State has increased for the last ten years much faster than the area of Improved lands in the State, and that consequently the lands cannot be "running out;"

That the process of nature to which we owe the present alluvial condition of the surface of the earth, are still at work and that land left entirely to itself will, by the action of water and vegetation, improve in fertility;

That the process of tillage alone may be made to accelerate this improvement, and help to provide for the necessary waste of marketing;

That rain penetrates the porous parts of the earth's surface, and penetrates through them until it comes to impervious strata, and that it runs along this impervious strata until it finds egress as springs, and that spring water is impregnated, more or less, with saline substances;

That the evaporation which is continually going on of the water from the surface of the earth, leaves the saline matter in the surface, as but a small part of the water that falls as rain over reaches the sea;

That the mineral springs of Saratoga and other localities, are exagerated illustrations of this process, and the more fertile conditions of valleys, is to be in part referred to the same cause;

That, in the present thinly populated condition of our Continent, the true purpose of American agricoltore at the present time is to wisely direct these natural forces, rather than apply pinches of guano and teaspoonfuls of super-phosphates to individual plants, although such applications may pay on some farms, and probably do pay well on all market gardening operations.

The objection to soil analysis is this:

The difference between the early soil of Virginia and the same soil in its present condition, has been made by the loss of 1,200 lbs. of alkalies to the acre. But this 1,200 lbs. forms not quite three ten-thousandths (000,27) of the soil to the depth of a foot.

The idea that any amount of variation within such infinitesimal limits can be measured and defined by quantitative analysis, is absurd. Top-dressing of the same amount, would in the same way, fail of being detected.

That directions given by agricultural chemists have led to successful results, is undoubtedly true; but these directions have been founded rather upon experience and observation than upon chemical analysis.—*New England Farmer.*

Cabbage for Stock.—Every farmer, and indeed, every person having a garden and a hen, a pig or a cow, will do well to have some cabbage plants with which to fill the ground when early crops have been removed too late for turnips. The cabbage is a sure grower, and faithful in its mission, whether put out early or late. To secure good, firm heads for table use; requires considerable care in kinds, times, soil, and culture; but to secure a good growth of highly nutritious and valuable food for stock, requires but a small measure of regard for either.

The cabbage contains a full proportion of nitrogen in addition to the oxygen, hydrogen and carbon, the elements of the great mass of the vegetable kingdom. In this, it is closely allied to ani-

mal food and on this account as well as others, it is a valuable addition to the usual food of animals. We believe the cabbage worthy of high estimation as a regular field crop, not merely for the pork and cabbage trade, but as food for cattle and hogs, and that it will be extensively cultivated for that purpose; but however this may be, we are confident that the cabbage affords the best means of filling the ground which, from any cause remains vacated the first of August.—*Cultivator and Gazette.*

Guano Trade.

In our last, under the head of Market we alluded to the fact that the Guano brought to this country, in other ports than that of Baltimore, was not subject to inspection, and that farmers should be on the alert that they had not an inferior article palmed off upon them, as it was believed that the guano now being imported, was not to be relied on, in all cases, as equal to that heretofore received, and if not inspected, loss might ensue.

The information alluded to, we find in the New York Evening Post, and copied into the Baltimore American and other papers, and was obtained from a gentleman who had been engaged in loading a ship at the Chincha Islands, and had been there several times. He gives some interesting information about the trade, the Coolies, &c., at the Islands, which we omit, and give the facts alluded to by us. He says:—

"The islands are about ten miles from the main land, and are composed of new red sandstone. The guano is not all of bird dung, but is largely composed of the mud of the ocean; that brought from Peru is so, at least. When anchors are hoisted into the ship from the holding grounds of vessels along the Peruvian coasts, large quantities of mud, of a greenish white color, are brought up, and this mud, when dried, makes guano equally good with the guano taken from the islands.

"The birds and seals come upon the island when the people are not at work, but it does not appear that their dug or decayed bodies are more than a foot deep on any of the islands. Fish are taken in great abundance about these islands, as are also seals, which come there in large schools. Sea lions also abound. The composition taken from the islands, called guano, is stratified, and lies in the same form it did before it was lifted up from the bottom of the ocean.

"Our informant says that a geological examination of the islands will satisfy any man that the guano ships are bringing away from these islands a very different thing from the dung of birds or decomposed animals,

"Gibbs & Bright, of Liverpool, have a lease on the Guano Island from the Peruvian government, for five years, which expires in 1857, but hope to get their lease renewed. This house pays the Peruvian government about $4,59 a ton for the privilege of taking all the guano from the islands, the government furnishing the men to dig the guano.

"The ships that load at the islands are mostly ships chartered to carry a cargo, or are sent there by the owners to take away a cargo, bought of Gibbs & Bright, who have the entire monopoly of the trade."—*Am. Farmer.*

Pruning Trees.

We extract the following from a paper read before the Cincinnati Hort. Society.

The principal objects of pruning, are to procure a good pole or trunk for timber; to form a head moderately open and spreading, (if a standard orchard,) for the protection, and healthy and perfect development of fruit; and subserve in some measure the purpose of ornament.

To effect these objects with the least trouble and greatest advantage upon all nonresinous trees, the following directions are recommended.

1. Begin to prune the tree when it is young.

2. Cut close and smooth to the pole or limb.

3. Cut, when small, the branches which are likely to cross one another, or which are likely to interfere, or become useless, or dead, and which, if suffered to remain, will require to be removed at a more advanced period of growth; when very large, they would create too great a shock upon the vital energies of the plant.

4. Avoid pruning to excess under our hot sun.—Let the branches occupy *at least* a third of the entire height of the tree.

5. Do not trim when the tree bleeds.

When the preceding suggestions are observed, I may add:

6. Pruning may be done at any time when the tree is in a dormant state; but the best and

safest time is when vegetation is at rest, just at the time of the rising of sap.

Shortening in, or the extirpation of water sprouts, may be done at all times in summer.

8. For dwarfing and early fruiting, shortening in or summer pruning is essential, but to be done with great delicacy at this season.

From the New England Farmer.

Deep Plowing.

My friend Brown:—I was pleased with the article in a late number of the "Farmer," from your able Northampton correspondent, E. C., on the subject of Deep Plowing. So far as I know, his views are entirely correct; and the good results realized from gradually deepening his plowing, are such as I should expect would follow his practice. He also relates the instance occurring in his neighborhood, of a gentleman from Boston having at once put a great plow beam deep into land which had not been plowed more than five inches deep, and turning up a large mass of under soil which had never before seen the day, without manuring the land at all, and finding that good crops did not follow the practice, he and his neighbors concluded that deep plowing would not do, that it "killed the land." This is by no means a singular and solitary case of indiscriminate deed plowing, and of incorrect and hasty conclusions drawn therefrom. Similar cases are of too frequent occurrence, and the public should be cautioned against plunging the plow into a poor subsoil at hap-hazard.

The average depth of plowing in New England will not perhaps exceed five or six inches. Now take two farms of equal size and location, equally manured well, and otherwise cultivated alike, except that on one the plowing is gradually and judiciously deepened till an active surface soil of eight to ten inches is attained, while the other is never plowed more than five or six inches deep, and I feel quite sure that the land plowed deepest will produce the best of the two, and be worth the most in after years, either to sell or to keep. Especially will the advantages of deep plowing be manifest, in those hot and dry seasons which in our climate so frequently occur, when the crops of all kinds will be much more likely to stand through the drought and yield well in a soil deeply worked than in one that is shallow, with perhaps a natural hard pan near the surface, or an artificial one, produced by the oft repeated action of the sole of the plow and feet of the oxen or horses, in an invariably shallow furrow channel.

An old friend who has resided now twenty years in Illinois, calling on me the other day remarked that in portions of that State the farmers were already finding it advantageous to plow deeper than formerly, when the land was new; that on his farm, with a surface and soil mostly of the vegetable mould, on a subsoil of clay, he was now succeeding better in the production of crops, by deep plowing, notwithstanding that the surface soil is somewhat worn, than he did formerly by shallow plowing and a virgin soil; and that every third or fourth year there occurred a protracted summer drought, which was apt to spoil the corn crop planted on shallow furrows, but by deeper plowing the bad effects of the drought were in a measure, overcome, and a fair yield of corn secured.

From several years of practice and somewhat particular observation, I am persuaded that there are but very few, if any, lands that may not be benefited by gradually deepening the soil, say an inch or two at each breaking up from grass, until a depth of eight to ten inches is obtained. The better class of lands will of course be susceptible of deeper tilth than could perhaps ever be conveniently given to those of the poorest quality, with annually a very thin surface soil, and a loose, hungry, or sour, or cold subsoil. The former will also allow of a more rapid increase in depth of furrow than would be advisable in the cultivation of the latter. Of course, no one can reasonably expect deep plowing, alone will make the thin primitive soils of New England highly productive.

We cannot at the best do much at farming here, without the liberal use of fertilizers accompanying good cultivation. But the advocates of deeper plowing than commonly prevails claim that, in connection with good farming otherwise, their system insures a greater improvement of the farm and more uniformly good crops, taking all kinds of seasons into view, than can be realized from a shallow tilth; that land deeply and thoroughly plowed, derives more advantage from desirable atmospherie influences, is easier to work in the after-cultivation of the crops, and susceptible of

more thorough pulverization, than can be attained by the shallow and superficial plowing which too commonly prevails.

But as remarked at the outset, a portion of the community need to be cautioned against indiscriminate deep plowing. Many persons are now yearly going to farming from other business, entering upon their new calling, or what was, perhaps, the pursuit of their younger and happiest days, with much enthusiasm and delight, and at the first go off at farming, they do not readily see how there can be too much of so good a thing as deep plowing.—The mistake committed by the gentleman from Boston, as related by your Northampton correspondent, is therefore of frequent occurrence. Land of inferior quality, especially as regards the subsoils, and that never was plowed more than four to six inches deep, is, perhaps, at once plowed ten or twelve inches deep, turning up a huge slice of loose and hungry, or cold or sour subsoil, and burying the manure at the bottom of the deep furrow, away from the agents of decomposition, where it lies perhaps quite inert; the crops are planted on the deep furrows, and not succeeding well, the proprietor is perhaps mortified and discouraged, and concludes that deep plowing will not do. Now the great point is to study the nature and condition of the soil and subsoil, and then adapt the practice to them. In some cases, where the subsoil is quite good, and manure can be plentifully supplied, even if the land has heretofore been plowed shallow, a furrow eight or nine inches may at once be taken, with benefit to the land and all the crops of the rotation following—especially if fine compost is plentifully and thoroughly intermingled with the under soil now turned up to the surface, by cross plowing to the depth of four inches.—The after-cultivation of the crop also will stir the subsoil and manure up together. It is a good practice in such cases, to leave the sod, or, what was before the deep plowing, the surface, underneath through the whole rotation, and the subsoil on top, where it is made active by the compost intermingled with it, and by the modifying influences of the atmosphere. If, when preparing this land for grain and grass seeds, the sod is thus left undisturbed beneath, and the seeds are cast upon the subsoil turned up at the first plowing, the new surface, while the land lies in mowing, will be filled with the thickly matted sward, so that by the time the land again needs plowing, this portion that was originally subsoil, will be well charged with vegetable matter, and be good, active soil, adding materially to the depth of the soil of the field. This I call good farming. There are other cases, where, the subsoil being not so promising, but still not very forbidding, the plowing may be advantageously deepened some two inches at a time, till the desirable depth is attained; and there are others, where the land being decidedly poor, with a sour deleterious subsoil, the plowing cannot be profitably deepened, except by a very gradual process; though still a little at a time of the subsoil may be brought up and corrected by good tillage, and in time a soil of comfortable depth be attained. In these matters one's eyes and observation must be wide awake, and his judgment must be the guide in practice.

I have sometimes thought, that in farming, almost more than in any other business, theories and methods in themselves, most excellent, are hastily condemned from being injudiciously practiced, while it is wholly the bad management that is at fault, and should be condemned.

F. HOLBROOK.

Battleboro', Vt., Aug. 7, '56.

Bone-Sickness in Cows.

Mr. J. A. Nash, of Amherst, Mass., writes as follows to the editor of the *Country Gentleman:*

In your paper of a recent date I perceive an inquiry by A. T. Tuttle, of Enfield, to which I deem it important that a correct answer should be given, both for the gratification of that gentleman, and also as affording information important to all dairy farmers on old lands.

It appears that Mr. Tuttle's cows have a morbid, sickly appetite for old bones; that those most affected with the disease, gradually lose their flesh and become poor; that, although they eat well, they appear dumpish, stiff in the joints, weak across the backs—so much so that they can hardly move. Mr. Tuttle has graphically described the symptoms of a disease to which milch cows, on old, worn out pastures, are always liable; but he has failed to give information respecting his land—whether it is old, or recently cleared, and if old, whether it has been long used

for dairy purposes, all of which is important to an intelligent answer to his inquiries.

In the absence of positive information, I shall presume that his lands have been long used for dairy purposes. Indeed the single fact that his cows are thus affected, affords strong presumptive evidence that his lands, both mowing and pastures, but more especially the latter, are dairy-worn. If so, the bone-sickness of his cows is easily pointed out; and although its application may be somewhat expensive, yet the expense incurred will afford a paying investmont. The cause of the disease, its cure as now existing, and the prevention of recurrence, are the points claiming our attention.

It should be born in mind that the cow creates nothing. It is true also that the grass creates nothing. Certain morganic substances exist in the soil, among which are phosphate of lime, potash, soda, common salt, gypsum, &c. The grass cannot create these substances for itself.—It can only draw them from the soil. If they exist abundantly in the soil, as in most newly cleared lands, those sweet, nutritious grasses, most valued by the farmer, will grow luxuriantly; but if the soil does not contain them, except in very minute portions, as in old dairy farms then those nutritious grasses will die out, and meagre, innutritious grasses will take their place. But it so happens that the same substances which are essential to the sweet, nutritious grasses constitute the essentials of milk. Of phosphate of lime, for instance, two ounces are required for the elaboration of each pail of milk in the mysterious organism of the cow; and several pounds are carried off in the bones of every calf sold from the farm. In process of time, this substance, which never exists but in small quantities, is exhausted. When no longer found in the soil, it cannot be in the grasses growing from the soil. But the cow cannot elaborate milk without it Still there is in the organism of the cow an effort of nature to elaborate milk. The little phosphate contained in her food is all abstracted from her system in the composition of milk. None is left for that steady and constant renovation of her bones which nature requires. Her bones are deprived of what is necessary to keep them in a sound, healthy, constantly renovated state. In other words, her bones are not fed with food convenient for them. Phosphate of lime is the proper food for bones, but this cow's bones have been cheated out of that bone-growing and bone-renovating substance. She has the *bone-sickness*. Never was a disease more appropriately named. It is called *bone-sickness* for two reasons: 1st, because it is really a disease of the bones, these organs having fallen into an abnormal, tckly state; and 2d, because it is manifested by an unnatural and, in some cases, an almost rabid craving for bones, so that the cows afflicted with it, as Mr. Tuttle says, will run for a bone as if a dog were after them. So much for the *cause*.

For the cure, the best prescription is to remove the cows to a good pasture, in which are plenty of clover and other sweet grassses, if it is summer; and to feed them, if it be winter, on good, well cured hay from richly manured land. Such food will supply the necessities of the milk giving animal, and will be likely to restore health. If a change of pasture could not be had, it would be well to soil the cows on grass cut from well manured mowing. It would also be well to give them bone-dust, ashes and salt. The latter, of course, should always be within the reach of cows. The two former would tend to mitigate, and might cure the disease. If the three were placed separately, the instinct of the animals would be the best possible guide which to take and which to reject; for I suppose that no animal would eat bone-dost, or ashes, or salt even, unless led to it by a real want of its nature.

Now for the prevention. This has been already intimated; for what would cure, would in this case be likely to prevent a recurrence of the disease. I believe cows never have the bone-sickness, if fed on rich, sweet p sturage, or on hay from well manured mown lands. But what shall be done with our old pastures, so poor that ten acres but keep a cow, and that on grasses so innutritious that she needs after all bone-dust, ashes, salt, and gypsum to keep her from sicknes? Put these things on the land. A compost of 5 bushels of ashes unleached, 4 of oyster-shell lime, 3 of cheap, agricultural salt, 2 of bone-dust, and one of gypsum, to the acre, would prevent the *bone-sickness*, and more than pay h expense, in the increased productiveness of the land.

Lockjaw in Horses.—Bleed the horse in the third bar of the mouth, and drench with strong salt water. This method has been known to be successful when all others have failed.

THE CAROLINA CULTIVATOR.

RALEIGH, OCTOBER, 1856.

Our State Fair.

The annual meeting of the State Agricultural Society will be held in this city, commencing on the 14th of the present month. The Executive Committee have taken such measures as will secure the amplest accommodations for all who may attend either as exhibitors or spectators. The Fair-grounds have been put in good order. We therefore recommend all who love the "good old State," to come up and take part in this annual festival of the Farmers. We should not advise our readers to attend, did we not believe that in so doing they would advance their own interests, and the cause of good Agriculture throughout the State. Farmers must study their profession: they must know what others are doing—what new implements have been brought out—who have the best breeds of farm stock—the different kinds and varieties of crops which have been cultivated successfully. Now where can all this be learned so quickly or so cheaply as at this great gathering of the people from all parts of the State. There is one kind of information which we would ask the farmers to pay especial attention to. Try to ascertain what has been the success or failure of the crops most cultivated. For upon that, the prices which shall rule during the year will be mainly based. To know just when to sell is one of the most difficult points to be determined.—But if any one will look round among his neighbors he will find some who seem to have the "knack" of always selling just at the right time. This is often attributed to good luck. Others seem equally "lucky" in always "holding back" till prices have fallen, and then they are in a great hurry to sell. Now if we are not greatly mistaken, there is much more of judgment than luck which determines the fortunes of these two classes of persons.—Of course on a subject so complicated, the most experienced may sometimes be deceived. But by careful study of all the facts which may be gathered by a careful observer, a good deal of certainty may be attained. A gathering like this of the people from all parts of the State, furnishes a fine opportunity to the wide-awake farmer to gain the kind of information required for fixing on the highest prices which may be expected during the year. While we are on this subject we will make a request of our correspondents, a compliance with which would add greatly to the value of our paper. Let those who write to us in regard to business or other matters relating to the Cultivator, give a statement of the condition and prospects of the crops in their neighborhood. If we could receive information of that kind regularly from all parts of the State, we would be able in each issue to give an account of the crops, which would be of great value to our readers. Or, what might be a better plan, let the State Agricultural Society organize a system for collecting accurate statistics of the amount and quality of the crops throughout the State. This matter has already received the attention of some of the oldest and most useful Agricultural Societies in the country.

That nothing may be wanting to secure a large attendance, the Executive Committee have obtained very liberal terms with the Railroad Companies for the carrying of both persons and articles for exhibition. Now that the Central Road is completed, we expect a much larger attendance from the Western part of the State. This section has never heretofore had a fair chance to be represented. Let them now show their brethren of the East, that North Carolina can produce something besides "tar, pitch and turpentine."

To the editorial fraternity we also have a word. They have not been neglected, but special accommodations have been provided for their benefit. Our thanks are due to the Executive Committee for a complimentary ticket inviting and admitting us to "all the privileges of the grounds." We shall endeavor to be on hand and prepare to "take notes" of what we shall see and hear.

Floral Hall has been considerably enlarged. Of course every body will wish to see the beauty and taste that is sure to be found there. If it is not taking too great a liberty, we would suggest to the managers that there should not be so much shutting of the doors of Floral Hall as on previous occasions. Too much regulation is always badly regulated.

But letting the past speak for itself, may the next Fair be so successful that every one shall forget that every exhibition has not been all that could have been desired. For such a result we appeal to the Farmer, to his wife, his sons and his daughters. Come one, come all. Each and every one of you resolve that you will do all you can to make it succeed, and even partial failure is impossible. It is the State Fair, of and for the people. The uniting of all that each may be benefited thereby. Every one can bring something. If you have a fine variety of corn, bring it. If wheat is your hobby, let us see some of your choicest kinds, don't be too particular. You may send different varieties of beans, peas, pumpkins, egg plants, in fact every thing that grows, and is useful for the outer or inner man. Your wife can send butter, cheese, bread, pickles, jellies, &c., &c. Your daughters can help their mothers, beside showing their own skill in preparing the many little things which contribute so much to the comfort and convenience of home. To the girls we would say, do not spend all your time upon a "*quilt*" of a "thousand pieces," nor devote too much time upon a piece of embroidery, when the only thought which shall strike the observer will be how many stitches it took to make it. Rather try such articles as will exhibit a degree of taste and skill, as well as time and patience.—In many senses economy is beauty. Any one can make a show if you give them money enough. The arranging of a boquet often shows more taste than the most elaborate needle work. Now cannot we have flowers for Floral Hall? They may be carried to Raleigh very easily by putting the stems in sand, and keeping the sand moist. Cannot the City of Oaks and Roses furnish a few flowers for an extra occasion like this? Let us see who will answer this question by sending the finest boquet. There ought to be a handsome premium for the fair hand that will furnish the prettiest flower-piece for Floral Hall.

Meteorological Register

For Chapel Hill.

Date.	Hight of Thermometer at 7 a.m.	2 p.m	9 p.m.	Hight of Barometer at 2 p.m. Inches.	Rain, Beg'ing	End	Quan'ity
July 1	81	92	77	29.61			
" 2	75	88	77	29.61	9½ p m	10 p m	0.038
" 3	73	89	81	29.54			
" 4	77	92	80	29.40			
" 5	76	91	79	29.46			
" 6	76	94	73	29.45			
" 7	74	90	70	29.46	3½ p m		0.354
" 8	70	78	74	29.46	8¾ p m	10 p m	0.128
" 9	72						
" 10							
" 11							
" 12		93	79	29.35			
" 13	78	88	74	29.48	1 ¼ p m	2½ p m	0.604
" 14	74	94	80	29.56			
" 15	73	96	84	29 55			
" 16	80	94	79	29.65			
" 17	76	97	80	29.66			
" 18	79	81	75	29.60	1½ p m	8¼ p m	0.330
" 19	73	88	73	29.53			
" 20	72	84	73	29.65			
" 21	66	88	77	29.74			
" 22	70	89	75	29.74			
" 23	73	87	76	29.76			
" 24	73	89	76	29.76			
" 25	72	87	78	29.71			
" 26	73	94	82	29.69			
" 27	76	97	85	29.70			
" 28	80	99	87	29.69			
" 29	80	100	83	29.64			
" 30	83	105	90	29.54			
" 31	83	101	87	29.55			
Aug. 1	79	96	76	29.60			
" 2	76	96	73	29.58	9 p m	11½ p m	0.540
" 3	73	91	80	29.44			
" 4	73	72	70	29.40	1¾ p m	3 p m	0.037
" 5	69	85	75	29.45			
" 6	75	87	73	29.59			
" 7	74	95	80	29.52			
" 8	75	96	70	29.50	2¼ p m	11½ p m	1.263
" 9	66	84	75	29.52			
" 10	69	92	80	29.52			
" 11	76	96	81	29.51			
" 12	79	81	73	29.45	2 p m	2¼ p m	.135
" 13	72	88	78	29.40	8½ p m	10 p m	.981
" 14	74	85	74	29.43	5½ a m	5¾ a m	.032
" 15	74	84	74	29.45			
" 16	71	84	73	29.42			
" 17	67	84	70	29.45			
" 18	64	79	66	29.46	3 p m		
" 19	66	81	69	29.14	4 p m	9½ a m 5½ p m	0.531 0.042
" 20	69	80	71	29.14			
" 21	67	83	71	29.30			
" 22	68	83	70	29.35			
" 23	68	91	82	29.39			
" 24	73	85	76	29.30			
" 25	70	86	72	29.28			
" 26	65	81	68	29.51			
" 27	67	75	69	29.59			
" 28	65	84	71	29.54			
" 29	66	80	74	29.33	5 a m	7 a m	0.227
" 30	69	79	68	29.40			
" 31	65	63	61	29.49	7 p m		

Whole depth of rain which fell in July, 1.454 inches.
" " " " " Aug. 3.788 "

The hottest day during the summer was the 30th of July. All the latter part of July was

exeeedingly warm and dry, and it was during this time that the corn crop was injured. In the first half of August the rains were frequent and quite abundant, nearly four inches in depth having fallen during that time.

Important to Wheat Growers in North Carolina.

At the meeting of the Scientific Association in Albany, this summer, some private conversation ensued upon the comparative merits of the grains grown in the West, North and South. It was observed that Southern flour had largely the preference in the West Indies and South America, on account of its being dryer and keeping better in hot climates.

A gentleman who attended the World's Fair in London, at once remarked that the finest flour he ever saw was made of North Carolina wheat, and ground at mills in New York. Being solicited to submit the observation to writing, Dr. Elwyn, of Philadelphia, well known for the interest he takes in agriculture and every thing connected with the useful arts, at once drew up a certificate, of which the ensuing is a copy:

"I have been desired, by Dr. Gibbon of North Carolina, to record the following fact as interesting to the wheat growers of that State. While acting as chairman of the committee "on articles used as food,' during the exhibition at the Crystal Palace, I was struck with the quality of the bread offered for examination by Hecker & Brother of New York. It was the whitest and best I ever saw. I asked —being a farmer—the very natural question, as to where they procured their grain; and was told that the bread was made of flour from North Carolina wheat; and to my further astonishment, was also informed that, in their opinion, the best wheat in the United States was that of North Carolina.

(Signed.) A. L. ELWYN.
Albany, N. Y., August 25, 1856.

Apple Pies Without Apples.—The following receipt is now being sold in some parts of the country for fifty cents, and an injunction of secrecy at that.

"Dissolve two-thirds of a tea-spoonful of tartaric acid in two cups of water; halve three crackers, and put them into a solution, letting them remain until thoroughly soaked, then place carefully in the pie, and pour on the acid water remaining. then sprinkle on cinnamon, and afterwards a cup of sugar, add a piece of butter the size of a walnut, and a little salt."

The North Carolina State Agicultural Society,

Will hold its Fourth Annual Fair and Cattle Show at Raleigh, on the 14th, 15th, 16th, and 17th days of October next:

$5,000 OFFERED IN PREMIUMS.

A list of the premiums offered can be obtained of the Secretary and officers of the Society.

General Order of Arrangemen s.

The grounds will be opened on Tuesday the 14th of October at 10 o'clock, A. M.

The only entrance Gate will be at the north side of the grounds, near Reception Hall, where badges of membership and tickets of admission can be procured.

All Stock and articles for Competition must be upon the ground by 10 o'clock, A. M., (Tuesday,) and properly entered upon the books of the Society, and no article or animal can be removed during the Fair except with the consent of the Society. Forage and grain will be furnished at the expense of the Society.

A Grand Procession of all Premium Animals will take place on Thursday, immediately after reading the decision of the Awarding Committees.

The Trial of Speed for Trotting horses will take place on the afternoon of Thursday and Friday, the 16th and 17th.

Carriage and Single Harness Horses will be exhibited on the track during the day on Wednesday. Also, a trial of Saddle Horses will take place on the same day, when the Judges will make their examinations and award the premiums.

The Plowing Match will take place on the grounds, on Wednesday the 15th, at 8 o'clock A. M.

The Annual Address will be delivered on the grounds on Thursday, the 16th at 11 o'clock A. M.

The Award of Premiums will be read and premiums paid immediately after the Address. Judges appointed to award premiums are particularly requested to report themselves at the business office in Reception Hall, at or before 12 o'clock, M., on Thursday the 14th.

An efficient Police will be in attendance for the preservation of order and of property.

The Annual Contribution of members has been reduced to Two Dollars, which entitles

each member to a badge, admitting the ladies of his family and all children under 18 years of age, during the Fair.

Clergymen and Editors are invited to attend, and are requested to report themselves at the business office in Reception Hall, where they will be furnished with complimentary tickets.

Agricultural Discussions will be held every evening during the Fair at the Commons Hall, and all interested in Agricultural and Mechanical improvement are requested to attend.

☞ Exhibitors are earnestly requested to have their articles on the Fair Grounds by 5 o'clock on Monday, the 13th of October. Those complying with this request will secure the advantage of the best location and arrangement of their articles.

THOMAS RUFFIN,
Chairman Ex. Com.

Jno. C. Partridge, *Secretary.*

Exchanges.

The Home Magazine, for August and September has been duly received. The illustrations are numerous and the tables of contents varied and attractive. We have frequently recommended this Magazine as a vehicle of pure literature, admirably adapted to family use. It is worth far more than its subscription price of two dollars. Address T. S. Arthur & Co., 103 Walnut St. Philadelphia.

Graham for August and October is also on our table, executed in its usual style of elegance. It fully sustains, so far as we can judge, its ancient reputation.

The Knickerbocker for August comes freighted with a vast variety of literary spices. It is always happy in the humorous line, especially when the editor wields the pen.

Putnam for the same month is before us with well filled pages. We know not how far it keeps within the bounds of prudence on agitated questions, but hope it has learned something from experience.

The "Ladies' Repository," for August has also been received. It is a pure and elevated publication, edited by Rev. Dr. Clark, of Cincinnati.

Le Bon Ton, for September, appears in all its usual fashionable attractions and splendid illustrations, which make it very acceptable to the ladies.

Dickens' "Household Words," also for September, needs only to be acknowledged.—The reading is always excellent.

Godey for October, is of course gay and splendid. We have not yet read it.

New Music.

We have received the following Music from Horace Waters, No. 333 Broadway New York:

I've Lingered too long at thy Side Love.—*A song, words by W. J. May, music by Ossian E. Dodge. Price* 25c.

A very pretty and easy song.

Brown's Passport.—*Polka by Johann Munck. Price* 25c.

This Polka is easy and well calculated to please.

The Banished Son.—T. B. Peterson, No. 102 Chesnut St., Philadelphia, has now in press to be ready on Saturday, Sept 27, *The Banished Son, and other Tales of the Heart*, by Mrs. Car line Lee Hentz.

The work will be complete in one large duodecimo volume, neatly bound in cloth, for $1 25; or in two volumes, paper cover, for $1. Copies of either edition will be sent to any part of the United States, *free of postage*, on remitting the price of the edition they may wish, to he publisher in a letter.

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☞ In the piece in our last number, about the two headed turtle, the types make the writer say, that the turtle was found eight miles below the surface of the ground. It should be "inches," instead of "miles." The little "bicephalus," is still alive and doing well.

Relieving choked cattle.—The following method of relieving neat cattle, when choked by a turnip, potatoe, &c., has been tried, it is said, and never known to fail: Pour into the throat of the animal, from a junk bottle, a pint or so of lamp or sweet oil, at the same time rubbing the throat briskly with the hand. Immediate relief will follow. This is easily tried, and may be the means of saving many valuable animals.

Remedy for Chilblains.—Wilson's Medical Times recommends the compound *iodine* ointment as a specific for chilblains. It can be procured of any apothecary.

Communications.

For the Cultivator.

Blind, or Secret Ditching.

Messrs. Editors:—In some of the back numbers of the *Cultivator*, I saw some pieces on "Blind or Secret Ditching"—two if I mistake not. One, if I mistake not, recommended laying down a log or pole on one side of the ditch, then to cover it with riven timber in a slanting position, and then fill up with dirt.—The other gentleman recommended a considerable layer of rails to be thrown in the ditch; then after throwing in some trash, or litter, to fill up with dirt.

My method of Blind Ditching is as follows: Cut your ditch as deep as you want it and about twelve or fourteen inches wide; (though if the ditch be very deep you must have it wider towards the top than twelve or fourteen inches in order to give room to work,) then lay in two poles as long and as strait as you can get them; then lay a third upon top; the poles may be five or six inches at the but end and with as little taper as possible; then throw in the trash or litter, and then fill up with surrounding dirt. I forgot to mention that there must be a space of an inch or two between the two first layers you lay down. Then in laying down the third, should there be any cracks or crevices from crooks or otherwise, you must make all these secure by filling up these cracks with small poles, chips, or something of that kind; then throw in trash such as corn stalks, leaves or anything of the kind that may be handy, and fill up as aforesaid.

In order that my remarks may be better understood and the general value of ditching more fully appreciated, I will give an abridged account of my ditching a pond, and its consequences. This pond stood at the foot of a small hill adjoining a body of low grounds. It had been attempted to be drained by the proprietor at that time, my grandfather, for whom I was then doing business, but failed on account of not being cut deep enough. Before I go any farther I will state that it was a great resort for wild ducks. I think I have seen fifty in it at a time—probably more. I have shot a muskrat in it too.

Well, we went to work upon it to ditch it, cutting the ditch in the site of the old one which had nearly filled up. A number of small gum trees had sprung up on either bank of this ditch, which made it extremely difficult to ditch on account of the numerous roots, so much so that it would have been much better to have cut a new ditch entirely. We got through with the roots, though, after a while. It was then easier ditching. Well, to be short, we cut the ditch nearly deep enough all the way, and as near to the pond as we could without letting the water out. We then broke away this embankment and let the water out, like turning a mill. The water in the pond was about one and a half feet deep, and covered nearly one quarter of an acre. We kept lowering the ditch until the water in the pond was exhausted. We then extended the ditch up through the pond as near the centre as we could, from a foot and a-half to two feet deep. The earth in this place was very rich, and as far down as we went I saw no change whatever. We cut the ditch very narrow in this pond, and thought to blind it by putting in cross bars and cutting the ditch a little wider at top and then fitting in a log in the ditch and on these bars, there being plenty of such logs aronnd the pond. We did a few pannels in this way, but found it tedious and troublesome, and subsequent experience has proved to me that it is not so good. We then quit that and got long straight poles, (some poplar and some pine,) and laid two side and side, and a third upon top, then after putting in pine and cedar brush, (the latter preferable) we threw in dirt enough to hold them steady. We then hauled all the logs from around the pond, that were too large for firewood, and threw in the ditch on the dirt and brush, some of them nearly two feet through. We then filled all up nicely with dirt and made a good and permanent ditch. The ditch from the edge of the pond to the mouth was from four to six feet deep and altogether one hundred and forty yards long. Water now runs out of this channel the whole length and has continued to do so ever since it was built, except one or two very dry summers. I missed it some though, in locating the ditch, which I will mention, thinking it may probably be of some benefit to beginners in this useful art. Instead of running the ditch through the centre of the pond, I should have run it around

next the foot of the hill and thus cut off the springs that supplied this pond. I afterwards had to cut two arms of ditches out to the foot of the hill to remedy the defect, when one ditch would have answered had it been rightly located. So, in conclusion I will say that I have some as good corn growing in the bed of this pond, and in some other places that have been fixed in a similarly treated manner, as the county can probably produce. From some of my ditched land, I count upon fifteen hls. corn per. acre where you could raise nothing without ditches. The ditches built under the plan recommended have never got out of order, though the oldest of them has only been built four years. I like it better though, than either of the plans spoken of in the fore part of the treatise from the fact that I believe it to be cheaper and likewise more durable. So in conclusion I say ditch, it matters not how wet your land is. Ditch, you can dry it.

Respectfully,

ALIQUIS.

Gold Region, Moore Co.

For the Cultivator.

Marion Co., Iowa, August 12, '56.

Mr. Editor:—I see in the *Cultivator*, a piece accredited to the "Country Gentleman," in which the writer argues, philosophically, that soil kept bare of herbage is not injured thereby. I do not claim the honor of being enough of a philosopher to show the error, which I apprehend, exists in that argument, but I will give two experiments, made by myself, whilst residing in Davidson County, in your State, that proved pretty clearly to me that nakedness was more injurious during the latter part of summer, than was the growth of a crop.

1st. *Experiment.*—A field covered with a heavy growth of crab-grass, was plowed in part with the intention of sowing wheat thereon.—But it was not sown. The other part of the field was left without pasturing. The following season the whole field was cultivated in corn, and the unplowed part produced the best crop. There was no assignable cause for the difference, except the exposure of the soil in the plowed portion of the field to the action of the sun and atmosphere.

2nd. *Experiment.*—Early in the spring a lot was enclosed in the corner of a field, and a stock of a few cattle regularly penned upon it at night until about the first of August. In order to preserve the droppings from the cattle, the ground was well plowed three or four times. On the 1st of August it was sown with turnip seed. A good crop was the result. The enclosure was then removed and the field planted with corn. The turnip lot did not produce more than half as good as the adjoining ground that had not been manured at all, and for several years continued unfruitful.

Some 60 or 65 years since, whilst a boy in Guilford County, in your State, on several occasions I noticed where small lots of ground were cleared during the summer for turnips, and afterwards more of the adjoining grounds cleared up; uniformly there was a marked difference in favor of ground where turnips did not grow.

What the "Country Gentleman" says with respect to the growth of young peach trees being much greater where nothing else is permitted to grow, is no doubt true. But facts have satisfied me that the action of the atmosphere is much more destructive to fertility, when the soil is naked during the summer, than is the production of a crop. As an evidence of the soundness of this theory, I will mention a well established fact. Exclude the atmosphere from a spot of ground, by building a house thereon, and though the floor may be tight, permitting nothing to fall through, yet in fifty or a hundred years a considerable quantity of saltpetre may be extracted from the soil that was poor when the house was built.

This subject is a most important one to the farmer, and merits the closest scrutiny. Causes possibly existed which escaped my observation, but so confident am I that the atmosphere is destructive to fertility in naked soils, that I would not permit a heavy growth of clover to be turned under in the summer, unless I intended to cover the ground again immediately with growing wheat.

HAWKEYE.

For the Cultivator.

Messrs. Editors:—Sirs—believing that the estimate placed upon the native grape of our forest, is far below its intrinsic value, with your permission, I will give your readers a plan of preserving them, that in my estima-

tion, makes them one of the greatest delicacies of nature, and yet attended with so little labor or expense; that none are too poor to have a supply for their tables.

As soon as the grapes are ripe, gather and shell them, and to every gallon of grapes add about four pounds of brown sugar, placing the grapes and sugar in layers in jars or other vessels. Cover the vessels closely to keep out insects. In three or four weeks, as soon as fermentation subsides, they are fit for use, and will preserve for years. The quantity of sugar ought to be proportioned to the quantity of fruit, so that fermentation shall not be prevented, but that it should subside at the vinous stage, and not continue to acidity.

HAWKEYE.

Marion Co., Iowa, Aug, 1856.

Miscellaneous.

The Fish Experiment.

Propagation and Domestication of Fish—Visit to Drs. Garlick and Ackley's Fish Nursery near Cleveland, Ohio.

The artificial reproduction and cultivation of fish, has for some time been practiced in parts of Europe. In France it is now carried on to considerable extent, and the produce of some of the streams and ponds, yield large profits. The subject is now attracting some attention in the United States. The New York State Agricultural Society, in their last premium list, have offered a prize of $100 for the best essay on the "Production and Preservation of Domestic Fish for Ponds."

Garlick and Ackley, known as distinguished surgeons of Cleveland, Ohio, were the first, we believe, to introduce the artificial spawning and domestication of fish in the United States. Dr. Garlick being an enthusiastic in this line, commenced the business in connection with his associate, Dr. Ackley, upon the farm of the latter, two or three years ago. They made several trips to Lake Superior and Fort Stanley, in Canada, to procure trout for stocking their streams, and in every instance were successful, except the first, when they lost a large number of fish in transportation.

After this, with personal attention, they found that by reducing the temperature of the water in the vessels containing the fish, to 32 degrees, by the application of ice, the respiration and circulation in fish was so reduced that they experienced no difficulty in transporting them any distance with perfect success. In this way they have procured at different times. 150 full grown trout.

Feeling an interest in the success of this enterprise, and while visiting Cleveland a short time since, we called on Drs. Garlick and Ackley, who very kindly conveyed us to the farm and fish nursery, situated about three miles from the city. The farm contains about 100 acres; through the timbered portion of it runs a ravine, abundantly supplied with never-failing streams of water. Across this ravine, dams have been built so as to form three ponds, connected by sluice-ways between In the upper pond the young trout are confined by netting across the sluice. The second ponds are destined for the fish after they have become so large as to be able to protect themselves from the voracious appetite of the elder fish of their race.

At the head of a large spring, and near the upper pond, is situated the hatching house.—In this house is a tank four feet wide by eight feet long and two feet deep. The water is received from the spring into this tank, and is discharged from a pipe near the top into the hatching boxes, ten in number, and so arranged that the first is higher in the series than the last, so that there is a constant stream of water passing from the tank above, through the two hatching boxes. In this tank we saw the *old pet* fish, "*Naiad Queen*," the prolific mother of thousands. Her mate "*Tryton*," like his sex sometimes in other departments of animated nature, had become somewhat surly, and had been assigned his abode, for the time being, in one of the ponds with the family at large. Our friends have so educated and trained the old queen that she has become as tame as a pet chicken, and ate minnows from our fingers readily. This fish was taken from the tank and placed in a pan for our inspection.—She is like all of this family, truly beautiful.—She measures about seventeen inches in length. Her weight we now forget, but with careful feeding can be increased with astonishing rapidity. We were presented by the gentlemanly proprietors with a most beautiful engraving of her.

It is the intention of these gentlemen to have some of the old and a number of the young fish on exhibition at the Ohio State Fair the coming fall. The display of domesticated Salmon and Trout, it is said, constituted a most interesting feature at the great National Exhibition recently closed in France.

Dr. Garlick is now engaged in writing a series of articles on the "Artificial Reproduction of Fish," which appear in the Ohio Farmer. They will finally be published in book form, and will, no doubt, prove of immense value to farmers and others who now own streams and ponds in this country.

In every State in the Union, and in almost every country, there are numerous springs and streams that, with comparative little labor, may be turned to profitable account for the production of fish.

Where brisk, cool springs are not to be found suited for trout, ponds exist adapted to various other kinds of fish that delight in such water. In a day's ride through some sections of the country, we have frequently met with a dozen springs and streams that might be employed in this way. In France, and other countries of Europe, not only trout and many other kinds of still-water fish are propagated to a great extent, but salmon by thousands are reared to full size in a very short time. In the northern and eastern sections of our country, but more particularly near the Northern Pacific coasts, numerous places abound, most admirably adapted to salmon. It is said that a thousand lbs. of fish in proper places can be produced at a tithe of the cost of raising an equal quantity of meat.—*Louisville, (Ky.) Courier.*

Corn Cobs In the Roof of a Horse's Mouth.—Last summer, one of my neighbors had a horse that declined very rapidly without any perceptible cause; he, by close observation, discovered the horse could not swallow his food. He had the tongue pulled out, expecting to find it sore about the root, but instead of a sore tongue, he discovered a piece of corn cob stuck fast in the roof of the mouth between the grinders. He loosened it with a stick, and the horse was relieved immediately, and improved as fast as he had declined. I had a horse in the same fix this spring, which I relieved before it was much reduced, having the experience of my neighbor to direct me what was the matter. I have very little doubt I lost a horse spring before last from the cause not knowing then what was the matter.—*Southern Planter.*

From the New England Farmer.

Strawberries—Coal Ashes.

The present season my crop of strawberries has been unusually abundant, the size of the fruit large, and the quality in every way satisfactory. For the information of your readers, I will give you a brief account of my treatment of the vines. My beds were mostly renewed last year and the year before, and are a mixture of Boston Pine and Hovey,s Seedlings. During the last summer and autumn great pains were taken to keep them free from weeds, and each plant in a hill by itself. For this purpose they were often hoed, and the runners cut off. In the fall I covered them with old hay and litter from the garden, but put on no manure. When the snow was a foot deep in March. by way of experiment, I had a coating of hard coal ashes put on the snow ano the beds This, as the snow melted, sifted down on the plants, and when the ground was dry the coarse particles were raked off.

The plants put out leaves and buds early, and with great vigor, many of the former have grown near a foot in height, the leaves of an uncommon size, and the yield was I think extraordinary.

Now, whether the hoeing, the snow, or the coal ashes produced the result, I cannot say, but as I have faith in coal ashes as of some efficacy, and it is quite evident they have done the plant no harm, my opinion is that there is something in the ashes adapted to the wants of the strawberry. If this is the fact, it will be well to make it known, and I trust others will try this and other experiments with this article, and let the public know the result.

Brookline, July, 1856. L. T. S.

The European Crops.—It is very evident that in France there is much apprehension of a bad harvest—the inundations by which the property to the amount of hundreds of millions of dollars were destroyed, will operate also very severely in regard to the crops, much of which were destroyed in the general calamity. The prospects of the harvest, however, in England, were, at last accounts, very favorable; but there is no certainty in their climate until the grain is

cut and secured. By a late arrival, we have the following facts noted:—

"It appears to be settled that very little grain will be exported this season from Russia. Hundreds of vessels which went to the Black Sea-ports for cargoes will return empty."

"The weather had at last become fine, but it was feared that the crops had already suffered from too much rain. Breadstuffs had been purchased in England for Portuguese account."

From the N. C. Standard.

Oh Come to the Fair.

Oh, come to the Fair,
Whoever you are,
And bring something with you, whatever it be;
Come one and come all;
Your State makes the call,
From the north and the south, from the west to the sea.

2

Bring your horses and kine,
Your sheep and your swine,
Your fowls of rare blood, and your Shanghais to boot;
And whatever you do,
Bring your fast trotters too,
The crowded tracks chances to take and dispute.

3

Bring on your leatherwork—
Also, your featherwork;
All curious productions of nature and art:
Come, with your tap-estry,
Also, your *map*-estry,
Paintings most rare, for the eye and the heart.

4

Bring fruit and bring wine,
Bring the ores from the mine—
The wealth the earth yields both above and below:
Bring the peach, blushing meek,
Like the rose on the cheek
Of the fair ones who'll come, and *not think of a beau!*

5

Bring your needlework, girls,
Right along with your curls;
Your basques, and your bonnets, your sleeves and your capes;
And bring, curiously wrought,
And with mystery fraught,
All those "wee little" garments of various shapes.

6

Let the matrons, too, come,
(Though they seldom leave home,)
With their counterpanes fine, and their bed quilts so rare:
With work of all kinds
Which their careful hand finds
So much pleasure in doing:—let *them* come to the Fair.

7

Ye mechanics, well skilled,
Let your Hall be well filled,
With all manner of work, in neat order displayed:
Let the grounds, too, attest
That you've all done your best;
And the State will be proud of the progress you've made.

8

Ho, ye Farmers, attend!
Of all classes the friend;
For if *your* work should fail, we would "*fare*" not at all:
Bring the fruits of your toil,
The rich cream of the soil,
In its varied forms, to the Farmer's own Hall.

9

So come right along;
There'll be music and song,
And dancing all night, so the papers do say:
The latch-string hangs out,
And your people, no doubt,
Will be happy to see you by night and by day.

10.

What a time it will be!
If you come you will see—
Hear the speech, see the crowds, and the brilliant array:
Come along then—come all,
Like the leaves in the Fall—
All your trouble and travel 'twill amply repay.

11

Lo the State gathers here,
At the close of each year:
Her honor's at stake, and she calls on us all
To prepare for the time
When she shows in her prime—
Can we turn a deaf ear to her heart-stirring call!

12

Then come to the Fair,
Whoever you are,
And bring something with you, whatever it be;
Come one and come all;
Your State makes the call,
From the hills of the west to the shores of the sea.

W. W. H.

A Cotented Wife.—It is a blessed thing for a poor man to have a contented, loving wife; one who does not wish to live in a style beyond her husband's income, just because her next door neighbor does; one who can be happy in the love of her husband, her home, and its beautiful duties, without asking the world for its smiles.

Difference in Cows.—Cows under certain constitutional circumstances, are naturally disposed to convert their food into fat; so much so that there is great difficulty in keeping some individuals in a breeding state, and more especially the improved Short-horns, Devons, and Herefords. Turn a cow of this description into rich grass, and she is soon useless for anything but the shambles. The quality of the milk she gives may be fine but the quantity almost nothing. We have had a Devon, tho property of a noble duke, which carried off the first prize in her class at one of the Royal Agricultural Society's meetings, not giving more than a quart at milking.

On the other hand, there is another class of cows naturally disposed to turn all their food into the pail, Turn a cow of this kind into rich grass along with the one above, and she will rather get poorer every day, if the milk is taken from her; while her plump and sleek rival is gaining weight. The former will consume greatly more grass and water than the latter, returning for it, in proportion, a still greater quantity of milk, but inferior in quality. In town dairies, when fed on sour grains, distillers' wash, &c., the quantity sometimes yielded is almost incredible. When such is the case, however, life is generally short, especially if cows are in a low state at calving. Hence the reason why dairymen purchase neat-calves of this class in good condition.

The above two classes may be called extremes between which there is a mean—cows which if turned into a rich field of grass along with the other, would keep themselves in good condition and gives a medium quantity of milk, the quality depending upon the richness of the food.—*Mark Lane Express.*

Potato Blossoms Injurious to the Crop.—Much attention has recently been drawn to the fact that the produce of potatoes may be much increased by plucking off the blossoms from the plants producing them, a result quite consistent with theory. This important observation has been completely confirmed by M. Feller, the director of the Agricultural Society at Darmstadt. In the year 1836, two fields of the same size lying side by side, and manured in the same manner, were planted with potatoes. When the plants had flowered, the blossoms were removed from those in one field, while those in the other field were left untouched.—The former produced 47 tubers, the latter 37—*Liebig.*

We happen to know that Dr Ayer's Cherry Pectoral and Cathartic Pills are good medicines, and shall proclaim it because we do know it. We confidently believe there is a vast amount of relief from suffering for our afflicted fellow men wrapped up in these skilful preparations, and we shall freely use our little influence to make them known to those who need them.—*Philadelphia Sunday Times.*

Reason and Common Sense.—Our readers may remember we have on several occasions spoken in very eulogistic terms of a preparation which Dr. Seth S. Hance, of 108 Baltimore street, Baltimore, Md., has discovered for the cure of Epileptic Fits. Now, in doing so, we have been actuated by the very best motives, viz: the alleviation of human suffering. From circumstances which have lately come to our knowledge, we fear there is a certain class of persons who are not disposed to try this remedy in a common sense manner. We allude to the fact of selecting a particular case in a town where perhaps there are six or eight cases, and trying it on one case. Now, perhaps the case selected might be the only one of the whole number that it would not cure. This is neither doing themselves nor the medicine justice. If a dozen persons were striken down with cholera in one town or neighborhood, would they all send for a physician, or would only one employ him, and wait and see if he cured the first patient? That plan of procedure would be most absurd. So in the case of Dr. Hance's remedy, every one who has Fits should try it for a reasonable length of time. It will not cure in a day or week; nothing worth doing can be accomplished at once. What is easily done, is as easily undone. The growth of time is enduring. From the most respectable testimony we have examined, we feel assured that by a proper perseverance in this remedy, nine cases of Epilepsy out of ten may be cured. The Pills are sent bp mail free of postage to any part of the world. Price one box $3; two $5; twelve $24. You will find the address above.

Derangement of the Liver, is one of the most common, as well as the most formidable of diseases known to American physicians. It had for years attracted the closest attention of

the medical faculty in all parts of the United States, and yet up to the time of the discovery of Dr. M'Lane's great Specific, it was almost beyond the reach of medical skill. Thousands had perished without even a hope of relief, and althongh thousands may yet be destined to feel the direful effects of this most complicated disease, it is now, thanks to the researeh of Dr. M'Lane, most completely brought within the scope of medical control. The proprietors of the Liver Pills feel confident that they offer a remedy which has been fully tested by time, and which has never failed of success when fairly tired.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Liver Pills, manufactured by Fleming Bros. of Pittsburgh, Pa,** There are other Pills purporting to be the Liver Pills, now before the public. Dr. M'Lane's genuine Liver Pills, also his celebrated Vermifuge, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

M'Lane's Vermifuge

No remedy cver invented has been so successful as the great worm medicine of Dr. M'Lane. All who have used it have been equally astonished and delighted at its wonderful energy and efficacy. To publish all the testimonials in its favor would fill volumes; we must therefore content ourselves with a brief abstract of a few of them.

Japhet C. Allen, Amboy, gave a dose to a child 6 years old, and it brought away 83 worms. He soon after gave another dose to the same child, which brought away 50 more, making 133 worms in about 12 hours.

Andrew Downidg, of Cranbury township, Venango county, gave his child one tea-spoonful, and she passed 177 worms. Next morning, on repetition of the dose, she passed 113 more.

Jonathan Houghman, of West Union, Park county, Ia. writes that he is unable to supply the demand, as the people in his neighborhood say, after a trial of the others, that none is equal to Dr. M'Lane's Vermifuge.

Messrs D. & J. W. Colton, of Winchester, Ind. happened last spring to get some of this Vermifuge. After selling a few bottles, the demand became so great for it that their stock was soon exhausted. They state that it has produced the best effect where ever used, and is very popular among the people.

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Table of Contents.

	Page.
A Wrinkle abont the Age of Horses,	229
A Selection,	233
Attend to the Legs of your Horses,	234
Apple pies without apples,	241
A Contented wife,	248
Bone Sickness in Cows,	238
Blind or Secret Ditching,	244
Composition and Formation of Steel,	234
Cabbage for stock,	235
Corn Cobs in the roof of a horse's mouth,	247
Destroying pernicious insects,	225
Deep Plowing,	237
Difference in Cows,	249
Exchanges,	243
Egyptian Alabaster	229
Facts for Farmers,	226
Fall Plowing	227
Good and bad Plastering,	228
Guano Trade,	236
How to make No-Matters,	228
Important to Wheat Growers in N. C.,	241
Lime on Clover,	226
Loss of weight in Curing hams,	230
Lockjaw in Horses,	239
Manufacture of Soap,	231
Meteorological Register,	241
Medical Notices,	249
New Music,	243
Our State Fair,	240
Oh, Come to the Fair,	248
Preserving Shingles on Roofs,	229
Packing Eggs to keep,	232
Principles of Agriculture!	235
Premium Trees,	236
Preserving Grapes,	245
Potatoe Blossom injurious to the crops,	249
Relieving Choked Cattle,	243
Small Farms,	230
Strawberries—Coal Ashes,	247
To take Stains out of Linen,	227
The Great Agricult'l Exhibition at Philadelphia,	230
To whiten Linen turned Yellow,	234
The N. C. State Ag. Society,	242
The Fish Experiment,	246
The European Crops,	247
The Banished Son,	248
Washing Clothes,	231

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February, 1856. tf

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Their increased facilities will enable them to execute the binding of Periodicals, Newspapers, Music, &c., with promptness and dispatch, at New York prices.

Books sent to them from any part of the State, with directions, will he hound in any style desired, boxed and sent back without delay. Address

JNO. H. DeCARTERET & SON,
Raleigh, N. C.

Newbern Agricultural Warehouse.

WILLIAM H. OLIVER, & CO.,

GENERAL COMMISSION MERCHANTS Newbern, N. C. Among our stock of Agricultural Implements mny be found Ploughs, embracing some 40 different kinds.

Straw Cutters of all the most approved kinds, varying in price from 5 to 50 dollars a piece; Corn Shellers, from 7 to 60 dollars a piece; among which may be found Readings celebrated Sheller, capable of shelling and fanning at same operation 2000 bushels corn per day. Also, the verticle cylinder, double and single iron nnd wooden spout shellers.

Grain Fans from 15 to 34 dollars a piece, among which may be found the best Fans in use. Wheat Thrashers and Horse Powers complete, capable of threshing 300 bushels wheat per day. Cultivator's, Harrows, Horse Rakes, Horse Hoes, Improved Scythes and Cradles. Plough Castings of every variety; farmers Boilers and Cauldrons; Sausage Meat Cutters and Stuffers; Pure Peruvian and Mexican Guano; Chappells Fertilizer; Groun d Plaster; Bone Dust; Prepared Guano, Poudrette, &c. &c..

Hoe & Co.'s Warrented Circular and other Saws; Patent Leather Banding; Best Bolting Cloth; Mill Machinery; Mill Stones; Water Wheels; Premium Georgia Cotton Gins, and Gin Gearing, &c., &c., &c., all of which will he furnished on the most liberal terms by WILLIAM H. OLIVER & CO.

Newbern, Janumry 1, 1856.

Strict attention given to the sale of all kinds o country produce.

FARMING IMPLEMENTS.

Little Ginnt Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with n complete assortment of the most approved Farming and Horticultural Implements, of good quality and nt low prices.

For snle hy R. L. ALLEN,
Jan. 1856 189 and 191 Water Street, N. Y.

DR. STRONG'S COMPOUND SANATIVE PILLS

These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints, Chills and Fever, Dyspepsia, Costiveness, Liver Complaint, Jaundice, Sick Headache, Scrofula, Salt Rheum, Fevers of all kinds, Loss of Appetite, Obstructed and painful Menstruation, and all lingering diseases.*

As a Female Medicine they act like a charm, and when taken according to the directions, they never fail to cure the worst cases of **Piles**, after all other remedies fail.

They purify the blood, equalize the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action; and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

Also

DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds, Catarrh, Bronchitis, Croup, Whooping Cough, Asthma, Consumption, Nervous Diseases, Dyspepsia, Costiveness, Erysipelas, Disease of the Heart, Inflammation and Pain in the Chest, Back and Side, and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food, in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant, Tonic, and Aperient. One 25 cent box possesses three times more power to cure diseases than a one dollar bottle of any of the Syrups, Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capable of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regular Appetite, and Strengthen the System.**

Price 25 cents per box, containing 25 doses of Medicine.

Call on the Agents who sell the Pills, and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of cures.

Both kinds of the above-named Pills are for sale in **Every Town and Village in North and South Carolina.**

And at Williams & Haywood, Raleigh, N. C.
May 1855. 3—

GREENSBOROUGH MUTUAL INSURANCE Company. The cost of Insurance on the Mutual plan is but a small sum, compared with a joint stock company. This company being located in the Western part of the State, consequently much the larger portion of the risks are in the West, very many of which are in the country.

The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President.*
S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney.*
PETER ADAMS, *Sect. & Treasurer.*
W. H. CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf.

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assured for life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $30, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

SLAVES are insured for a term of from one to five years, for two-thirds their value.

All losses are paid within 90 days after satisfactory proof is presented.

DIRECTORS.

CHARLES E. JOHNSON,	WM. W. HOLDEN,
WM. D. HAYWOOD,	WM. D. COOKE,
JOHN G. WILLIAMS,	R. H. BATTLE,
H. W. HUSTEN,	WM. H. JONES,
WM. H. MCKEE,	P. F. PESCUD'
CHARLES B. ROOT,	SEATON GALES.

OFFICERS.

DR. CHARLES E. JOHNSON, *President,*
WILLIAM D. HAYWOOD, *Vice President,*
JAMES F. JORDAN, *Secretary,*
WILLIAM H. JONES, *Treasurer,*
H. W. HUSTEN, *Attorney.*
CHARLES E. JOHNSON, M. D. } *Medical*
WILLIAM H. MCKEE, M. D. } *Board of*
RICH'N. B. HAYWOOD, M. D. } *Consultation.*
R. H. BATTLE, } *Executive Com-*
W. W. HOLDEN, } *mittee.*
CHARLES B. ROOT, }

Communications should be addressed, (post paid) to JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA
MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

OFFICERS OF THE COMPANY.
President.
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*
John R. Williams, }
T. H. Selby, } *Executive Committee.*
C. W. D. Hutchins, }

This Company has been in successful operation for more than 7 years, and continues to take risks upon all classes of property in the State, (except Steam Mills and Turpentine Distilleries,) upon favorable terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Country risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured.

The average cost of Insurance upon the plan of this Company has been less than one third of one per cent. per annum, on all grades of property embraced in its operations.

All communications in reference to insurance should be addressed to the Secretary, post paid.

J. C. PARTRIDGE, *Sec'y.*

Raleigh, June 9th, 1856.

JOHN N. GORDON,
Grocer and Commission Merchant and Dealer in Metals,
14th Street, near the Exchange Hotel,
RICHMOND, VA.

May, 1856. 8.—tf.

PIANOS, MELODEONS, AND MUSIC.

THE CASH SYSTEM ADOPTED! PRICES GREATLY REDUCED.

HORACE WATERS,

No. 333 Broadway, New York.

AGENT FOR THE BEST BOSTON AND NEW YORK INSTRUMENTS

THE LARGEST ASSORTMENT OF PIANOS, Melodeons, Musical Instruments, and Musical Merchandise of all kinds, in the United States. Pianos from ten different Manufactories, comprising those of every variety of style, from the plain, neat and substantial 6½ octaves, in Walnut or Rosewood Cases, from $150 to $200, to those of the most elegant finish up to One Thousand Dollars. No house in the Union can compete with the above in the number, variety, and celebrity of its instruments, nor in the Extremely Low Prices at which they are sold.

Horace Waters' Modern Improved Pianos,

With or without Iron Frames, possessing in their improvements of over-strings and action, a length of scale, power, and compas of tone equal to the Grand Piano, united with the beauty and durability of structure of the square Piano. They are justly pronunced by the Press and by the first Musical Masters to be equal to those of any other manufacturer. They are built of the best and most thoroughly seasoned material, and guaranteed to stand the action of every climate.

Each Instrument guaranteed to give satisfaction, or purchase-money refunded. Second-hand Pianos at Great Baroains, constantly in store, price from $30 to $140.

HORACE WATERS' MELODEONS, superior Instruments in tone, touch and durability of make. (Tuned the equal temperament.) Melodeons of all other styles and makes. Price, $45, $60, $75, $100, $125, $140; double Reeds, $150; double Reeds and two banks of Keys, $200. Less a liberal discount. Clergymen and Churches, an extra discount.

MARTIN'S GUITARS, *Brown's Harps, Flutes, Futinas, Accordeons, Violins*, and Musical Instruments of all kinds, at lower prices than ever before offered to the public. A large discount to Teachers and Schools. The trade supplied on the most liberal terms.

MUSIC:—One of the largest and best selected catalogues of Music now published, comprising many of the choice and most popular airs of the day, and will be sold at one third off from the regular prices.

Music sent by mail to all parts of the country, post paid. Particular and personal attention paid to all orders received by mail. Satisfaction guaranteed in every instance. Pianos and Melodeons for rent, and rent allowed on purchase. Pianos and Melodeons for sale on monthly payments. Second-hand Pianos taken in exchange for new. General and select Catalogues and Schedule of prices forwarded to all partsof the country by mail.

☞ *Great Inducements offered to Agents in all parts of the Country, to sell the Horace Waters' Pianos, Melodeons, and Catalogue of Music.*

TESTIMONIALS FROM PROFESSORS, AND OPINIONS OF THE PRESS.

Horace Waters, Esq., 333 Broadway, New York:

Dear Sir,—Having examined your Piano-Fortes from scientific and appropriate tests, I am enabled to form a satisfactory judgement of their merits, and it is with pleasure that I can speak of them as among the most celebrated and improved makes of the day.

For Power, brilliancy and richness of tone, elasticity of touch, and beauty of finish, they will not suffer in comparison with those of any other manufacturer, and those desirous of obtaining a really good Piano-Forte—one that will prove an equivalent for their means, will find such a one in your beautiful instruments.

THOMAS BAKER,
R.A.M. Leader of Jullien's Band, and Musical Director and Conductor at Niblo's Garden.

Pianos and Music.—We learn that Horace Waters, of 333 Broadway, N. Y., agent for the sale of many of the most celebrated makers of Pianos and Melodeons, is offering them at prices which we advise all who desire to purchase to avail themselves of. He is also selling his large and well known Catalogue of Music at one-third off from the regular prices, and will forward the same free of postage. His offers to the trade, teachers, and schools, are of the most favorable character—all of which he will be able to fill to the letter, for having wisely adopted the cash system. The Horace Waters' Pianos are known as among the very best. We are enabled to speak of those instruments with some degree of confidence, from personal knowlege of their excellent tone and durable quality.—*N. Y. Evangelist.*

The treble is clear, pure, powerful, and very melodious, the base is deep, rolling, and sonorous; the middle part is rich, and sympathetic, and possesses the power of singing, *i. e.* of uniting the sound of each tone, in a degree but rarely achieved.

Henry C. Watson.

September, 1856. 7—tf.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. Cooke, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

Executive Office,
Raleigh, Jan. 26, 1856.

Mr. William D. Cooke has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

Dear Sir:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
WILL: A. GRAHAM.

January 26th, 1856.
Wm. D. Cooke, Esq.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

N. B.—The copartnership heretofore existing between W. D. Cooke and Samuel Pearce in the proprietorship of the Map has been dissolved by mutual consent.

WILEY'S NEW FORM BOOK.

A NEW AND PRACTICAL FORM BOOK, containing forms of all those Legal Instruments important to be known by the People of North Carolina and designed for the use of *Justices of the Peace, Sheriffs, Clerks, Constables, Coroners*, compiled and arranged by C. H. Wiley, Esq., to which are added the Constitutions of North Carolina and of the United States. Published by Wm. D. Cooke, Raleigh, N. C.

Any person enclosing One Dollar in a letter, or that amount in Postage Stamps, will receive by return mail a copy of the work *free of postage*. *Be very careful to send for* "Wiley's New Form Book" and address
WM. D. COOKE, Raleigh, N. C.

April, 1856.

THE NEW HOTEL,

WELDON, N. C.,

IS NOW OPEN for the reception of visitors. This Hotel is new and newly furnished, and the Proprietors will use every effort to keep a GOOD HOUSE, and render their guests comfortable.

They respectfully solicit a share of public patronage.
T. J. JARRATT & Co.
Proprietors.

MEALS always ready on the arrival of the cars.
July, 1855. 33—tf.

WHITFIELD'S HOTEL,

WELDON, N. C.,

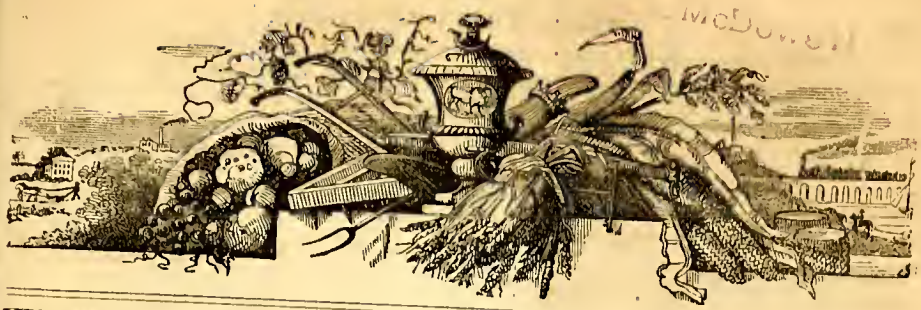
JOHN SMITH, Jr., Proprietor,

Formerly of Charleston, S. C.

MEALS, FIFTY CENTS.

Left hand side going South---Right hand side going North.

August 18, 1855, tf.



THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WILLIAM D. COOKE, Editor, and Publisher.

VOL. 2. RALEIGH, N. C., NOVEMBER, 1856. NO. 9.

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Each subsequent insertion,	75
1 page one year,	15,00
½ " "	30,00
One page "	50,00

North Carolina State Fair.

Report of Awarding Committees for the Fourth Annual Fair. October, 1856.

THOROUGHBRED HORSES.

1d best Stallion, 5 years old, "Secession," Josiah Turner, Hillsboro', $15

est Brood Mare, 4 years old, "Laura," R. A. Hamilton, Raleigh, 20

d best Brood mare, 14 y'rs old, "Priam" P. C. Cameron, Orange. 10

st Brood mare and Colt, 4 years old, "Anna Chase," J. Turner, Orange, 20

st Filly, 4 y'rs old, Thomas J. Faison, Sampson, 10

With regard to the Morgan Stock, we consi- the purity of blood of the Horses of Drs. ore and Strudwick, "Saratoga," and "Carolina Black Hawk," equal, and worthy of a premium of $20 each, as the Executive Committee may think proper; and Dr. Strudwick's Sorrel mare, "Jenny Lind," the best exhibited, and deserving of a premium of $10.

THOS. J. FAISON,
J. M. BULLOCK,
E. P. JONES.

SINGLE HARNESS AND SADDLE HORSES.

Best single Harness mare, "Jenny Lind," Dr. W. S. Strudwick. Orange, $20

Best single harness horse, raised in the State, "Peacock," Dr. G. W. Blacknall, Granville, 20

2nd do do do "Jim," W. M. Barford, Granville, 15

Best Saddle Horse, Jno. Wimbush, Granville, 20

2nd best Saddle Horse, "Aleck," J. P. Turner, Orange, 15

The undersigned, the only two of the committee who acted on the above, beg leave respectfully to make the above report. They have examined some of the Morgan stock of horses, and would say, they have never seen horses of superior style and action.

E. D. McNAIR,
JOS. E. WILLIAMSON.

MATCHED HORSES.

Best pair Matched carriage horses, Mrs. Thos. Bragg, Raleigh, $25

Best do do do raised in the State, E. D. McNair, 25

2nd best pair matched carriage horses raised in the State, J. C. Branson, Randolph, 20

P. A. DUNN,
JOS. K. MARRIOTT.
JNO. F. FOARD.

HORSES FOR ROAD AND FARM WORK.

Best Stallion, 6 years old, "Blacksman," J. M. Mangum, Wake, $25

Best Stallion Colt, 2 y'rs old, "Telegraph," Thos. M. Lloyd, Orange, 15

Best Stallion under 2 y'rs old, "Selim," 1 y'r old, T. F. Bailey, Granville, 10

Best Brood Mare, over 4 year old, "Nelly" S. O'Bryan, Person 15

Best Filly, over 2, under 4 y'rs old, E. Donnel, Guilford, 10

David Cheek offered the 2nd best Stallion under 2 years old, but no premium was offered.

JOSIAH TURNER, Jr.
JNO. H. NEAL,
ELI SMITH.

JACKS AND JENNETTS.

Best imported Jennett, 4 years old, B. R. Ward, Chatham, $15

Best imported Jack, E. H. Ward & Wm. Russel, to be divided, 25

Best Jack raised in the State, W. R. Russel, Caswell, 25

Best Jennett, do do B. R. Ward, Chatham, 15

We the Committee on Jacks and Jennetts, awarded to H. Ward, of Chatham, and Wm. Russell, the first premium on their Jacks, "Black Damon," and "Santa Anna," to be divided between them—both being of the first size aud muscle.

WM. F. COLLINS,
JOS. S. HOLT.

MULES.

Best pair of Mules, 6 years old, raised in the State, W. Whitaker, Wake, $25

Best single mule 3 years old, do do, W. M. Thomas, Rockingham, 10

The committee are of the opinion that a mule colt belonging to Jacob Mordecai, of Wake, 16 months old, deserves a premium.

R. R. BRIDGERS,
J. W. B. WATSON.

CATTLE—DURHAMS.

Best Bull Calf, "Albert," Crouse & Irvine, Lynchburg, Va. $10

Best Cow, 9 years old, "Mollie," Crouse & Irvine, Lynchburg, Va., 20

2nd best Cow, L. Springs, Charlotte, 15

Best Cow under 3 years old, "Rosetta," Crouse & Irvine, Lynchburg Va., 15

Best Heifer Calf, Crouse & Irvine, Lynchburg, Va., 10

E. A. CRUDUP,
W. R. HOLT,
K. RAYNER.

CATTLE—DEVONS.

Best Bull, 3 years & 7 months old, "Lord Baltimore," W. W. Carraway, Lenoir, $25

2nd best Bull, Dr. John F. Foard, 20

Best Bull, over 2 and under 3 years old, Nat. Jones, Wake, 20

Best Bull over 1 and under 2 years old, L. Springs, Charlotte, 15

Best Bull Calf, Walter Gwynn, Wake, 10

Best Cow, 3 y'rs old and over, W. Gwynn, Wake, 20

2nd Best Cow, do do, Crouse & Irvine, Lynchburg, Va. 15

Best Heifer Calf, Sylvester Smith, Raleigh, 10

Best Cow, over 2 and under 3 years old, L. Springs, Charlotte, 15

The undersigned after three ineffectual efforts to get exhibitors to lead their cattle from the sheds, made the foregoing awards; in the majority of instances being compelled to view the cattle as they stood in the stalls; some few Devons were loose on the grounds, o which the committee took no notice, not being able to identify them.

W. W. WHITAKER,
H. T. CLARK,
R. R. BRIDGERS.

GRADES OR MIXED BLOOD AND NATIVE CATTLE.

Best Bull over 3 years old, "Granville," S. H. Dunn, Wake, 2

Best Bull under 3 years old, S. Smith, Raleigh, 1

Best Cow, under 3 years old, E. Hall, Raleigh,

As there is no premium offered that will ta in Mr. Wm. Russell's cattle, your committ think it their duty to recommend his cattle your attention.

WM. A. EATON,
L. O'B. BRANCH
S. SMITH.

The Ex. Committee awarded to him for collection $10.

WORKING OXEN.

Best pair of Working Oxen, R. Crawford, Wake, $20
2nd best do do H. Franklin, Wake, 10

J. R. MOORE, Chairman.

FAT CATTLE.

One Fat Cow, Crouse & Irvine, Lynchburg, Va., $7

JOHN HUTCHINS,
E. SMITH,
E. HOLT.

MILCH COWS.

Best Milch Cow, Crouse & Irvine, Lynchburg, Va., $15
2nd best do Leroy Springs, Charlotte, 10

GEO. T. COOKE,
W. C. UPCHURCH,
JEPTHA HORTON.

SHEEP.

Best full-blooded Cotswold Buck, J. W. Norwood, Orange, $20
Best pen of 3 South Down Ewes, Dr. Wm. R. Holt, Davidson, 15

There is also on exhibition one fine Buck, exhibited by Dr. Wm. R. Holt, that is mixed, half Leicester and half South Down, which is worthy of praise, and the Committee are of opinion, that under the rules of the Society, they have no power to award premiums for any Buck, or Ewe, or pen of Lambs of mixed blood. There being on exhibition one pen of fine Lambs, Merino and South Down exhibited by Seth Jones, of Wake, the above, the Committee recommend to the favorable consideration of the Executive Committee.

N. PRICE,
HUGH McLEAN.

GOATS.

Best pair pure Cashmere Goats, R. Peters, Georgia, $15
Best common Goat, R. Crawford, Wake, 3

JOHN O'RORKE,
A. BEAVERS,
A. HINTON.

SWINE.

Best Breeding Sow, over 1 year old Large Breed, S. Smith, Wake, $10
Best lot of Pigs under 6 months old, Large Breed, S. Smith, Wake. 6
Best Boar, over 1 year old, Small Breed, E. Hall, Wake, 15
Best Breeding Sow over 1 year old, Small Breed, W. W. Whitaker, Wake, 10
Best Boar over 2 years old, Native, W. W. Whitaker. Wake, 15
Best Breeding Sow and 6 pigs, Native, W. W. Whitaker, Wake, 15

The Committee recommend a premium of $10, to Mr. Cuthrell, of Davie county, for a fine pair of pigs, cross on Nobone and Woburn.

G. W. WILDER,
ALLMAND A. McKOY,
JOHN E. BECTON.

AGRICULTURAL PRODUCTIONS.

Best variety of Bread Corn, Jno. Hutchins, Wake, $3
Best variety of Stock Corn, S. H. Dunn, Wake, 3
Best variety of Wheat, S. H. Dunn, Wake, 3
Best variety of Oats, E. Hall, Wake, 3
Best variety of Field Peas, S. H. Dunn, Wake, 3
Best variety of Cotton, N. Price, Wake, 3
Best specimen of Cotton in seed, N. Price, Wake, 5
Greatest variety of Ag. Productions raised on one farm, S. H. Dunn, Wake, 10
Best specimen of Leaf Tobacco, Jno. W. Barnes, Granville, 3

The Committee recommend that a premium of $3 be awarded to Jno. Hutchins of Wake, for 1 Basket of White Rice Beans, and a premium of $5 to Jacob Modecai of Wake, for specimens of the following Peas; Claybank, Whippoorwill, Gallivant, and Bass or Claret, and Navy Beans.

J. W. NORWOOD,
JNO. A. GRAVES.

TOBACCO.

We the undersigned have met at Planter's Hall and examined the different lots of manufactured Tobacco and Segars and are of opinion, and so report, that Y. & E. P. Jones, of Caswell county, be allowed $10 for the best lot of manufactured Tobacco, and Dr. N. Joiner, of Pitt county, be allowed $5 for the best box of Segars.

WILLIAM LONG,
JAS. M. SCALES,
W. T. HAWKINS.

SALT PROVISIONS.

1 dozen Bacon Hams, N. Price, Wake, $10

Eight Hams, exhibited by Ransom Johnson, cured without smoke, which the Committee re-

commend to the notice of the Executive Committee, as very excellent Bacon. One old Ham by Mrs. Tucker, quality not judged of by the Committee for the reason that it was not cooked, but which appeared to be very sound and good.

JNO. A. KIRKLAND,
E. DONNEL.

DAIRY.

Best sample of Fresh Butter, Miss Julia A. Holt, Davidson, $10
2d. Best sample of Fresh Butter. W. B. Williams, Warren, 5

LEROY SPRINGS.
J. C. SMITH
E. DALBY.

CABINET WORK.

Mahogany Rocking Chair, H. J. Brown, Raleigh, $3
Bureau, Thomas Carter, Wake, 5
Cabinet, do do 5

The Committee admire the pine used in various articles exhibited by S. H. Rogers, but do not think that the workmanship is of sufficient neatness to entitle any of the articles to a premium.

WILLIAM THOMPSON,
THOS. W. DEWEY.

FRUIT AND FRUIT TREES.

Best and greatest variety of Apple Trees, Thomas Lindley, Chatham, $10
Best and greatest variety of Pear Trees, Thomas Lindley, Chatham. 10
Best and greatest variety of Peach Trees. Westbrooks & Co., Guilford, 10
Largest and best variety of Apples, Westbrooks & Co., Guilford, 10
Largest and best variety of Pears, Westbrooks, & Co., Guilford, 10
Largest and best variety of Peaches, Wm. A Eaton, Granville, 10
Largest and best variety of Strawberry Vines, Westbrook & Co., Guilford, 2

The exhibition of apples embraced one hundred and forty-two varieties. Of course, the same varieties in many instances, were exhibited in the different lots. The Committee experienced great difficulty in making their award. But after much deliberation, and aid from gentlemen of science in this department, awarded the premiums as above. It is due to the Messrs. Lindley, to state that their fruit was much injured by a storm—but even with that drawback, the Committee were for a time in doubt as to their final judgment. The exhibition was large and most beautiful, giving evidence of great skill and knowledge; and in the opinion of the Committee, would successfully compete with any of a similar character in the Union. By the industry and enterprise of the Messrs. Westbrook, the Committee were enabled to compare upwards of twenty varieties of the Northern apple, with the native growth, and in every instance, except in that of the Rhode Island Greening, the comparison was in favor of the apple of the native growth, in color, flavor and in size. The "Romanite" of Westbrook & Co., was a splendid fruit, and the Highest Wonderful, Boston Russet, Chatham Pippin (native) and White Guilford (native) of Lindley & Co., were of prodigious size, beautiful appearance, and fine flavor. Too much praise cannot be extended to the Messrs. Lindley, and to Westbrook & Co. In this department they are essentially benefactors to the State.

The dried fruit of the Westbrook & Co. embracing Apples, Peaches, Pears and Cherries, were very fine and received the warm commendation of the Committee.

The Quinces exhibited by Mr. McKimmon, the Pomgranites, by Mrs. Ruffin Tucker, the Filberts, by the same lady, and the Lemons of Mrs. Strange of Raleigh, were of a splendid description, and the thanks of the Society are due to them for these beautiful productions of their zeal and industry.

In conclusion, the Committee beg leave to commend both Westbrook & Co., and the Messrs. Lindley to the patronage of the Society, and to our fellow-citizens generally. They richly merit and deserve it. They likewise recommend that Messrs. Lindley & Co., receive a Diploma for their exhibition of apples.

After the Committee on Fruit and Fruit Trees had closed their examination, and made their awards, a box of "Preserved Dried Peaches" was exhibited by Mrs. Augustine H. Shepherd, of Forsythe county. The Committee regret that this article could not be placed in competition, for the reason that their award had been made. But they unanimously concur in saying that it is the most beautiful specimen of dried fruit, they have ever seen, in color, flavor and excellence of preservation, and recommend that a Diploma be awarded therefor.

JOHN WINSLOW, Ch'm.

Diplomas approved.

VEGETABLES.

Six best Cabbages, Wilson W. Whitaker, Wake, 2

Best Egg Plants, Mrs. T. P. Devereaux, Wake, 2

Best Onions, E. Hall, Wake, 2

do Pumpkins (4) do do 2

do Sugar Beets (8) Joseph Small, Pittsboro, 2

Best Turnips (6) G. Banks, Wake, 2

Sweet Potates (1½ bush.) J. G. Du Pre, Wake 2

One extraordinary large Beet, by Dr. Montgomery attracted general admiration—3 very large Cabbages, by Mrs. J. B. G. Roulhac, deserve special notice. The best and largest variety of vegetables, by Mrs. M. H. Brown, deserve a Premium. A number of vegetables are exhibited, which deserve special notice and reward (for which no premiums are offered) contributed by Mrs. Dr. R. S. Mason, Mrs. James McKinmon, Mrs. T. P. Devereaux and Mrs. G. T. Cooke.

P. F. PESCUD,
Q. BUSBEE,
G. T. BROOKS.

PLOWS.

Best Side Hill Plow, E. Whitman & Co., Baltimore, $10

Best Double Mould Board Plow, R. Sinclair jr. & Co. Baltimore, 10

Best Two Horse Plow, Borum & McClane, Norfolk, 10

Best Two Horse Plow manufactured in the State, W. B. Williams, Warren, 10

Best Wrought Plow manufactured in the State, Richardson, Warren, 10

Best Wrought Two Horse Plow manufactured in the State, D. F. Cuthrell, Davie, 10

Best Subsoil Plow, E. Whitman & Co., Baltimore, 10

Best Subsoil Plow manufactured in the State, W. B. Williams, Warren, 10

Best Toothed Cultivator, R. Sinclair, jr. & Co., Baltimore, 5

Best Toothed Cultivator manufactured in the State, W. B. Williams, Warren, 5

Best Harrow, Borum & McClane, Norfolk, 5

" " Manufactured in the State, W. B. Williams, Warren, 5

Best Horse Rake, E. Whitman & Co., Baltimore, 5

Best Iron Roller, smooth, E. Whitman & Co., Baltimore, 5

Roller for Crushing Clods, E. Whitman & Co., Baltimore, 5

Best and greatest variety of Agricultural Implements manufactured in the State, W. B. Williams, Warren, 25

Wainwright, Vanhook & Co., exhibited a small lot of Plows, equal to others of the same description, which we recommend to the favorable consideration of the Executive Committee. Messrs. Horn & Stanton exhibited a Cotton Planter, which we think well calculated to save labor, and to plant the seed regular, which we respectfully recommend, as entitled to a premium.

W. R. SMITH,
S. G. WARD,
J. L. HORN.

FARM VEHICLES.

Best 2 horse wagon, W. J. M. Thomas, Rockingham, $10

Best Dumping Cart, H. Horton, Wake 5

Best Wheel Barrow, E. Whitman, & Co., Baltimore, 2

W. W. WHITAKER,
LEROY SPRINGS,
R. H. WAINWRIGHT.

PLEASURE CARRIAGES.

Top Barouche, A. M. Gorman, Raleigh, $15

Hickory Buggy, J. Bashford, do 15

Painted Buggy, 2d pr. B. Perkinson, do 10

Model of a Sulky, —Richardson, Warren, 5

Improvement in Buggy-brake and Swingletree, D. F. Leak, Rockingham, 5

Improved adjustable carriage coupling, E. R. Crabtree, Orange, 5

W. W. HOLDEN,
J. R. HARRISON,
T. JENKINS.

HORSE POWER.

Best Sweep horse power, E. Whitman & Co., Baltimore, $20

Best Railway, horse power, E. Whitman & Co., Baltimore, 20

Do Grist Mill, R. Sinclair & Co., Balt. 20

Do Broadcasting and Drilling machine, E. Whitman & Co. Baltimore, 15

Best Broadcasting machine for Guano &c. E. Whitman & Co., Baltimore, 15

Best Cotton Gin, J. H. Carlisle, Halifax, 20

Do Reaping machine, E. Whitman & Co. Baltimore, 20

Best Mowing machine, E. Whitman & Co, Baltimore, 20

Best Hay and Cotton Press, E. Whitman & Co., Baltimore, 20

Best Smut machine, E. Whitman & Co., Baltimore, 10
Do Threshing machine, —— Davis Petersburg, Va. 20
Best Saw Mill, (Portable,) Tappey & Lumsden, Petersburg, Va., 20
Do Corn and Cob Crusher, E. Whitman & Co., Baltimore, 10

THOS. D. HOGG,
A. McKNIGHT.

MILL FABRICS.

Best piece Sheeting, J. Newlan & Son, Alamance, 10
Best 8 bunches of Cotton Yarn, Newlan & Son, Alamance. 10
3 Coils Cotton Rope, Newlan & Son, Alamance, 5
1 piece Black Cassimere, Young & Grier, Charlotte, 15
Best piece of Jeans, Young & Grier, Charlotte, 10
Best piece of Flannel, Young & Grier, Charlotte, 10

J. L. HORN, Chairman.

FOOD CONDIMENTS, &c.

Best specimen of Wheat Flour, I. H. Rogers, Wake, $10
2nd best specimen of Wheat, N. Price, Wake, 5
Best specimen of Corn meal, E. Hall, Wake, 5
Do do Rye Flour. R. L. Patterson, Salem, 5
Do do Starch, N. Price, Wake, 3
Do Wheat Bread, D. H. Dickerson, Raleigh, 3
Do Honey strained, S. Smith, Raleigh, 3
Do do in the comb, Mrs. J. C. Partridge, 3
Best domestic Wine, Catawba, D. M. Lewis, Franklin, 5
Best and Greatest variety of Domestic Wines, D. M. Lewis Franklin, 10
Best Rose and Currant Wines, J. Ayres, Petersburg, Va. 5
Best and greatest variety, J. Ayres, Petersburg, Va. 10
Best sparkling Catawba Wine, N. Longworth, Cincinnati, Ohio, 5
Best sparkling Isabella wine, N. Longworth, Cincinnati, Ohio, 5
Do Apple Brandy, 47 years old, J. Tisdale, Nash, 5
Best Sweet Peach Pickles, Mrs. W. H. Jones, Raleigh, 3
Best Oil Mangoes, Yellow Cabbages and Brocoli Pickles, Mrs. J. Ayres, Petersburg, Va. 3
Best Martina Pickle, Mrs. Littlejohn, Franklin, 3
Best Domestic Sauce, Mrs. Littlejohn, Franklin, 3
Best Tomato Catsup, Mrs. J. Ayers, Petersburg, Va., 3
Best Crackers, R. Patterson, Petersburg. Va., 5

R. B. GILLIAM,
A. M. LEWIS,
J. P. H. RUSS,
N. JOYNER.

SUNDRIES.

Best specimens of Ambrotypes, &c., Havens & Mallon, Raleigh, $10
Box of Shaving Soap, Mrs. J. M. Barnes, Granville, 3
30lbs. Washing Soap, Mrs. J. M. Barnes, Granville, 3
Box of specimens of Soils and Marls, Prof. Drysdale, Duplin, 15
Best specimens of Printing, W. D. Cooke, Raleigh, 5
Best specimen of Candles, Mrs. J. C. Partridge, Raleigh, 5
Lot of Bar Soap, Costin & Gifford, Wilmington, 3
Best lot of Wagon Harness, J. Jones, Rockingham, 5
3 Fine Spanish Saddles, C. W. D. Hutchings, Raleigh, 10
Best Carriage Harness, C. W. D. Hutchings, Raleigh, 15
Lot of fine Brogan shoes, J. Ramsour, Lincolnton, 3
Harness Leather, J. Ramsour, Lincolnton, 3
Kipskins, do do
Calf Skins, do do
Goat Skins, do do
5 Rifles, A. C. Ledbetter.
Lot of Sole Leather, M. Tomlinson, Randolph, 10
Best Case of Boots and Shoes, H. Porter, Raleigh, 5

F. J. HILL, *Ch'm.*

COOKE'S NEW MAP OF NORTH CAROLINA.

Raleigh N, C, October. 18th 1856.

SIR:—The Committee to award premiums at the late State Fair, "upon Sundries," reported that "Cook's New Map of North Carolina," was worthy of special notice, and the Executive Committee of the Society have directed me to request you to

amine the Map and make out a special report upon the same, to be published with the reports of the Awarding Committees.

The Map will be placed in your hands for examination.

Very respectfully,
Yours, &c.,
JNO. C. PARTRIDGE, *Sect.*

To Prof. E. EMMONS,

Guion's Hotel, Oct. 20, 1856.

To JNO. C. PARTRIDGE, *Secretary of the North Carolina Agricultural Society.*

SIR:—I have had frequent opportunities of testing the correctness of Mr. Cooke's New Map of North Carolina, and parts of the adjoining States. This Map is worthy of special notice: 1st., from the fact that it embraces those parts of Virginia, South Carolina and Tennessee, which are of immediate interest to the citizens of this State. 2d, That the Eastern part of the State is compiled from data, obtained through the determination of the Coast Survey. 3d, It contains an entirely new feature in its profile of the mountainous parts of the State, which exhibits the relative heights of many of the most interesting points in the western ranges of the Blue Ridge and Alleghanies. In addition to the foregoing, it may be justly said, that Mr. Cooke has taken unwearied pains to correct the geography of the different counties, and to insert the prevalent names of places, those for instance which have come into use since new lines of travel have been established. It is in fact a new Map, and the only map which can be relied upon for accuracy in its details. It is, moreover a handsome production, and its typography is highly commendable from its beauty and distinctness.

Most truly yours,
EBENEZER EMMONS,
State Geologist.

NEEDLE WORK, &c.

Best Silk Embroidery, Vest, Mrs. Dr. Dodson, Milton, $6

2d. Best Silk Embroidery, Childs Sacque, Mrs. Ruffin Williams, Raleigh, 4

Best Silk Embroidery on Silk, Miss A. Grimes, Raleigh, 4

2 Infants Caps, Mrs. J. B. G. Roulhac, 4

Collar and Undersleeves, Guipure Work, Mrs. M. Lucas, Fayetteville, 6

Morning Dress, English Embroidery, Miss Bledsoe, Raleigh, 3

Infants Dress, English Embroidery, Mrs. Johnson, Yanceyville, 2

2 Skirts, English Embroidery, Mrs. Jere. Nixon, Raleigh, 2

Feather Work, Talma, Tippet and Fans, Mrs. J. C. Partridge, Raleigh, 6

Childs Dress, Socks and Edging, Miss Rebecca Trull a blind pupil in the N. C. Institution for the Deaf and Dumb and the Blind, made entirely by her, 6

Specimens of Sewing by Mary Trull, Mary Burt, and Narcissa DuPre, Blind pupils in the N. C. Institution for the Deaf and Dumb and the Blind, divided between them, 6

2 Fancy Parlor Chairs, Mrs E. Taylor, Raleigh, 3

2 Chairs, embroidered, Miss F. Kerr, Yanceyville, 2

Specimen of Sea Moss, arranged, Miss E. Colburn, Raleigh, 2

Potichimonia, Miss Nash, Hillsboro', 3

3 Crocket Collars, Miss Maria E. Cooke, Raleigh, 6

Chenille Work, Miss Gallagher, Washington, 3

Raised Worsted Work, Miss Gallagher, Washington, 3

Ottoman Cover, Miss Laura Phillips, 3

Ottoman Cover, Miss Bettie Harris, 2

Wax Flowers, Miss A. E. Hollister, Raleigh, 3

Tapestry Work, Mrs. A. Ramsour, Lincolnton, 6

1 Shirt, Miss A. C. Peebles, 9 years old, Kinston, 3

Infants' Cloak, Miss Ashe, Wilmington, deserves honorable mention.

Silk Stockings, Mrs. James Ayres, Petersburg, Va., 3

Hair Wreath, Miss Laura Murphy, Sampson, 3

Hair Bracelet, Miss Lucy Foster, 2

THOMAS BRAGG, Ch'm.

HOUSEHOLD FABRICS.

Silk Bed Quilt, Mrs. G. W. Mordecai, Raleigh, 5

1 Silk Bed Quilt, Miss Sophia C. Hunter, 2d premium, Dip.

2 Bed Blankets, Miss R. Broughton, 1st. premium, 5
1 Bed Blanket, Mrs. C. A. Webster, 2d premium, Dip.
Domestic Carpeting, Mrs. F. B. Fields, 1st premium, 10
Domestic Corpeting, Mrs. Rosa A. Lewis, 2d premium, 5
1 Pair net Blankets, Miss Mary E. Hunter, 1st premium, 5
Knit Curtains, Mrs. Ruffin Tucker, 1st premium, 5
1 Knit Counterpane, Mrs. Eliza L. Taylor, 1st premium, 5
1 White Counterpane, Mrs. M. L. Jones, 2d premium, Dip.
Counterpanes, Mrs. J. B. Johns, 3d premium, Dip.
1 Bed Quilt, Mrs. M. G. Burrows, 1st premium, 5
1 Patch Work Quilt, Mrs. J. R. Williams, 2d premium, Dip.
1 Bed Quilt, Mrs. Jno. Y. Jones, 3d premium, Dip.
1 piece Fustian, Mrs. J. M. Barnes, 1st. premium, Dip.
Silk Patch-work Piano Cover, Mrs. E. A. Harris, 1st premium, 3
Worsted Stocking, Miss Hattie L. Cooke, 1st premium, 2

J. H. BRYAN,
MARY ST. C. COOKE,
SUSAN STUART.

HAND POWER.

The Committee on Hand Power Improvements respectfully report: That during the entire day of Thursday, they gave a careful examination of all machinery of this class. They are pleased to see a manifest improvement in useful adaptation and improved construction, in most of the articles submitted, without any increase of price, and they are further led to hope, that the more extended use of machinery in the construction of all agricultural implements, will enable the manufacturers to give more solidity and strength without an enhancement of price. They recommend to the Executive Committee for premiums the following articles:

Best Corn Sheller, R. Sinclair & Co., Baltimore, $8
Best Corn and Seed Drill, R. Sinclair & Co., Baltimore 5
Best Turnip Drill, R. Sinclair & Co., Baltimore, 5
Best Iron brace, Grain Cradle, R. Sinclair & Co., Baltimore, 5
Best Wheat Fan, J. Montgomery, Md., 8
Best Sausage-meat Cutter, E. Whitman & Co., Baltimore, 3
Best Grass Sneaths, E. Whitman & Co., Baltimore, 3
Best Vegetable Cutter, E. Whitman & Co., Baltimore, 5
Best American Straw Cutter, E. Whitman & Co.. Baltimore, 8
Best Washing Machine, Alex. Dickson, Orange, 5
Best Double Corn Sheller, Borum & McLane, Norfolk, Va., 8
Best Potatoe Digger, Borum & McLane, Norfolk, Va., 2
Best Wooden Hay Forks, Borum & McLane, Norfolk, Va., 2

Very many articles of this class were exhibited that are now, in very general use, and only such as have been improved, have been considered worthy of special notice.

W. R. HOLT,
CHAS. B. MALLETT,
SOLOMON DIXON.

POULTRY.

Best pair of Shanghais, Charles Busbee, Raleigh, $3
Best pair of Polands, Master Roulhac, Raleigh, 3
Best pair of Brahmas, R. B. Anderson, Raleigh, 3
Best pair of Game, J. J. Williamson, Raleigh, 3
Best pair Wild Indian Game, H. M. Miller, Wake, 3
Best pair of Sumatra Game, J. M. Crenshaw, Wake, 3
Best pair of Stone Fence Game, J. J. Williamson, Raleigh, 3
Best pair of Dominica Game, H. McLean, Harnett, 3
Best pair of Turkies, E. Hall, Raleigh, 3
Best pair of Canada Geese, A. F. Davidson, Mecklenburg, 3
Best Muscovy Ducks, H. Mordecai, Wake, 3
Best pair of Common Ducks, W. F. Collins, Wake, 3

Best and largest exhibition of Poultry, E. Harris, Raleigh, 10

D. W. WILLIAMS,
S. BRODIE.

WORKS OF ART, TASTE, PAINTING, &c.

The undersigned Committee on Discretionary Premiums, on Works of Art, Taste, Painting, &c., have performed their duty, and beg leave to report to the Executive Committee, that they find several Paintings on exhibition worthy of their decided approval.

The Committee would most particularly notice, as entitled to commendation, four Oil Paintings executed by Mrs. R. M. Saunders of Raleigh, being numbered 253. In case the Executive Committee decide to award pecuniary premiums to Paintings, the undersigned would designate these Paintings of Mrs. Sanders, as entitled to the first or highest premium.

The Committee also take pleasure in expressing their admiration of four Paintings by Mrs. Ramsour, of Lincolton, and especially a young St. John, a piece possessing decided beauty. These pictures are numbered 2, 3, 4 and 5.—In case premiums are awarded, the Committee consider these Paintings of Mrs. Ramsour, as entitled to the second premium.

The Committee beg leave to make honorable mention of a Portrait Painting, by Mrs. Anna Busbee, of Raleigh—numbered 101.

The Committee also mention as deserving of notice and praise, one "Grecian Painting," exhibited by Mr. Christian, from the Raleigh Methodist Female Seminary—numbered 156; one Oil Painting, 171, by Miss C. A. Blake, of Raleigh. Several Crayon Drawings by Miss R. M. Dewey, of Raleigh, numbered 15, 16, 17, 19 and 20 and 46. Some Crayon Drawings by Miss Anna Hollister, of Raleigh, numbered 34 and 35; two ditto, by Mr. Christian, numbered 157 and 158. A lot of Ambrotypes by Messrs. Havens & Mallon, and of colored Daguerreotypes by Mr. Copeland.

Respectfully submitted,
KENNETH RAYNER,
ALDERT SMEDES.

AGRICULTURAL ESSAYS.

The Committee to whom was referred the consideration of Agricultural Essays beg to report. The Committee regret that their duty has been so slight, as but one Essay for the premium has been presented. The Committee have carefully examined that, and find it to be a valuable contribution to the annals of the Society, and are certain that if its suggestions were fully carried out, great improvement in production would be the consequence. They therefore award the premium of $10, to the author, John H. Bryan, Jr., Esq., and hope on a future occasion, that Mr. Bryan will have a sharper competition for a similar result.

Respectfully submitted,
T. P. DEVEREAUX, Ch'm.

SPEED OF HORSES.

The undersigned Committee appointed to test the speed of single harness horses, make the following report. Five horses were entered, to wit—

Bay horse, "John Hancock," by J. H. Neal.
Bay horse, "Bob," by S. Hays.
Sorrel Filly, "Ivyloo," Dr. G. N. Moore.
Chesnut horse, "Jack," by W. Alston.
Bay horse, "John," by R. Tucker.

The horses made two heats of one mile and a quarter each, and we hereby award the premium of $25, to the horse "John Hancock," as the fastest horse on the track.

P. H. DUNN,
W. J. HAWKINS,
J. P. WILLIAMSON,

SECOND TRIAL OF SPEED OF HORSES.

Four horses were entered:
Bay mare, by J. Newsom,
Sorrel Filly, "Ivyloo," by Dr. G. W. Moore,
Bay horse, "Bob," by S. G. Hayes,
Mare, by W. H. Wheeler.

The premium of $5 was awarded to S. G. Hayes' Bay Horse, "Bob."

G. T. COOKE, Ch'm.

RECIPE FOR MENDING CHINA.—From an English almanac we cut a recipe for mending china, a long time since, and the opportunity having occurred for trying, we found it admirable, the fracture scarcely being visible after the article was repaired. It is made: take a very thick solution of gum arabic in water, and stir into it plaster of Paris until the mixture becomes a viscous paste. Apply it with a brush to the fractured edges, and stick them together. In three days the article cannot again be broken in the same place. The whiteness of the cement renders it doubly valuable.

Annual Address,

Delivered before the North Carolina Agricultural Society, at the Fair Grounds, near Raleigh, on Friday, 17th October, 1856, by Prof. E. MITCHELL, *of the University.*

Three weeks ago last Tuesday, I was honored with a communication from the Committee of the Agricultural Society of North Carolina, in relation to the duty I now discharge. A gentleman *had been* selected for the performance of it, in all respects qualified, -one who would have offered for your acceptance the counsels of a wisdom, in which the operations of a mind richly endowed by nature, would appear, combined with the fruits and results of earnest study, mature reflection, and a very sufficient experience. But, it having been ascertained that this excellent gentleman would be called away and detained elsewhere by circumstances, at the time beyond his control, it became necessary to find a person who, on the spur of the moment, would provide something that would pass muster at this anniversary.—The Committee did me the honor of taking it for granted that if I could not, on so short a notice, prepare an addre s suited to the importance of the subject and the dignity of the occasion, I might, at any rate, make believe do so, as well as some other people. Three weeks and two days were, I acknowledge, ample time for the task assigned, if one had nothing else to do. But we are overrunning with students at the University, and have abundant occupation in the discharge of our duties there, not only every day but all day, which, of course, alters materially the condition of things. So much of apology seems to me appropriate in the way of deprecating too severe and searching a criticism, in case that in regard to the matter or the execution of what I have now to offer, I shall be judged to have made some *approach* only to a decent respectability.

But a more weighty objection to the speaker, in the capacity in which he now appears, may be found in his manner of life, and what constitutes his employment from one year's end to another. He is nothing but a monk, it may be said, (a married one, by the way,) who is kept perpetually cloistered up there at the University, engaged in communicating to the young men the rudiments of science. What can he know about the operations of farming, the cultivation of the ground, or the raising of cattle?

What is here, as we may suppose, offered as an objection to me, constitutes, in my judgment, my very highest recommendation. It were a good thing for people of all occupations, professions and conditions in society, of each sex and every age, to have now and then from some authentic source, a statement of the opinions entertained respecting themselves and their modes of proceeding, by such as are the farthest possible removed from them in their social position and pursuits. It would be very amusing at least, and might be useful sometimes, for lawyers, preachers, shoemakers, farmers, doctors, merchants, and others to listen to the talks their neighbors have about them.

If somebody would only come over to our side of the house, and disclose the communications the sex have with each other about the men, when their heads are brought into closest proximity, and the sweet, low tones of their voices only are heard, but the words they utter are undistinguishable; or if the women could hear the frank and undisguised opinions of the men about themselves, when these same men speak out fearlessly to one another, instead of humbly talking blarney at the feet of a wife or a lady-love, it might result in a mutual benefit.

One of the happiest in conception, as well as successful in execution, of the productions of the poet Burns, is the Twa Dogs; where he introduces two individuals of the canine race, both apparently of fair character in their respective spheres, but occupying very different positions in society—one a polished gentleman and the other a plain, unpretending peasant, as interchanging opinions about the characters and conduct of mankind, when

> "Upon a knowe they sat them down,
> And there began a long digression
> About the lords o' the creation."

I never saw two wagon horses of a Sunday or other day, when they may happen to be at leisure, standing together and thinking to each other for hours, without being desirous to know what ideas may be passing through the mind of each. If I could get hold of a hog newspaper, in which there was a communication from one who had lately been put up to fatten, expressing his opinions on matters and things in

general, I should peruse his article with extreme interest. He would probably state that the character of the human race seemed to have changed greatly of late, and for the better.—For that, whereas a few weeks ago his venerable and venerated mother, a sow somewhat aged, with a large family about her, could never crawl, when half famished, through an opening in the fence around a cornfield and help herself to a breakfast, without being cursed, driven rudely out, pelted with stones, beaten with a club, and her ears cruelly mangled and torn by ferocious dogs; here he, the writer was, in a comfortable yard or pen, with corn or other savory food always lying by him, a plenty of water supplied, a pleasant sleeping place at night, so that it was not his practice now to root any more except for exercise and his own amusement. He had doubts, indeed, about where all this considerate kindness would end; but for the present he was comfortable and very happy.

Now, upon the principles here laid down, I can very well conceive that the farmers of North Carolina may be willing to know what a body of men so excessively learned as are the Faculty of the University, think about their o erations and upon farming in general. I assure you they entertain opinions upon these subjects (some of them) which are quite peculiar. Some of these I have taken the trouble to set down; "which," however, as Mark Anthony says in the play, "which, pardon me, I do not mean to read." I stand here, then, as the unworthy representative of the University, in the presence of the farmers and planters of the State, to discourse to *them* about their own peculiar business, and to offer them counsel in relation to matters which they understand so much better than I can pretend to do.

In navigating a vessel across the ocean, there are several particulars to be attended to. Not only are the sails to be trimmed and set in such a manner as to catch the breeze, the helm to be managed with skill, the course by the compass to be noted and the log to be thrown at intervals so as to ascertain the progress the good ship is making, but from the record of observations so obtained, the position of the mariner on any particular day and at any hour is to be calculated, so that it may be known whether he is drawing near to the desired haven or approaching a dangerous coast. I propose to examine and ascertain, as accurately as I can, whereabouts we are in the great ocean of agricultural improvement and knowledge; especially that part of our knowledge which is most intimately connected with the science of chemistry. To do this it will be necessary to look pretty far back, as well as immediately about us. If any art or science is warranted in tracing its history to the very cradle of the human race, I suppose this to be eminently true of farming, inasmuch as we have it from the very best of all authorities, that the father of the human race was put into the garden of Eden, to dress it and to keep it. Of the agriculture of this garden I do not propose to treat at present, though I may find occasion to speak of it hereafter. I come down, then, at a single stride from that remote era and unknown locality on the earth's surface to the most ancient seat of civilization and the arts; to Egypt and what is most worthy of attention in the condition and modes of culture in that country.

It seldom rains in Egypt, which, so far as the growth of vegetables is concerned, is dependent altogether upon the waters of the Nile. The habitable and cultivable part of that country, if not confined absolutely to the low grounds of that stream, extends but a very short distance beyond them. Once in a year, somewhere between the middle and end of June, the river begins to swell from the effect of rains which have fallen, we do not know how long before, in the interior of the continent of Africa. The quantity of the water flowing in it goes on increasing very slowly for about two months, at the end of which time the channel of the Nile is brimful and it begins to come over the banks and cover the low grounds. A month later it is at its highest point, and a month later still, or at the end of October or beginning of November has returned to its channel again, leaving the soil after having been, flooded for two whole months, most thoroughly wet, and impregnated also with whatever elements of fertility the river has brought from the regions of its remote fountain head. The ground now receives what little breaking up it requires, and the wheat which is by far the most important crop, is sown. As the atmosphere of that country is always dry, at least as compared with that overhanging the other portions of the earth's surface, (an effect probably of the deserts that

border Egypt on either hand,) the climate is favorable to the health and vigor of this particular grain. It is very little subject to blast, or rust, or mildew, or to any other of those casualties, which sometimes blight the hopes of the farmer in our own country. The agriculture of Egypt was therefore mainly, if not altogether mechanical, the overflowing of the Nile supplying annually the elements of a perennial fertility.

Palestine or the Holy Land, the theatre of so many miraculous events recorded in the Scriptures, was a very different sort of country. With some plains of moderate extent, the greater part of its surface is rolling or broken. The rock that underlies the soil is limestone. Here, as in Egypt, the kind of culture to which the population are in a great measure, if not altogether restricted, is determined by causes beyond human control. During four months and a half of the year—the three summer months, September, and the first half of October—rain very seldom falls there. The rains commence in the latter part of October and continue through the winter and spring. It follows that the rotation of crops must always have been imperfect in that country. Our common Indian corn, even if known, could never have been cultivated to an advantage in Palestine. Wheat was, and is, as in Egypt, the principal grain. The soil has always been, and is now, favorable to its growth and productiveness; so that with an imperfect cultivation, the returns are good. It does not appear that the Hebrews were ever remarkable for their skill in farming. That they made some use of manure in the time of our Saviour, appears from the parable of the barren fig-tree, which the dresser of the vineyard requests to have spared, till he shall have had an opportunity to dig about it and *dung* it; after which, if it shall still continue unproductive, he consents that it shall be cut down. The means of improvement used by them appear to have been mostly mechanical; the loosening of the soil, and the eradication of the weeds, so as to hinder them from interferring with the growing crop.

When we pass from Palestine to the shores of Greece and Italy, we come to regions whose characteristics in their relations to agriculture bear a nearer resemblance to those of our own land. They are not without forests: their climates are somewhat warmer than ours; the deposition of moisture, under the forms of rain, hail or snow, instead of being confined to particular seasons, occur, as with us, in succession —one or the other of them, at moderate intervals, throughout the year. The modes of culture, therefore, that are appropriate to these famous countries, may be expected to approach more nearly to what obtains amongst ourselves. It is *possible*, therefore, that by the study of the ancient classes, some of which touch incidentally upon the topic of agriculture, and a few, as Virgil, Cato, Varro and Columella, treat professedly of it, we may be able to learn something in regard to the best methods of managing our farms here in North Carolina.—In point of fact we can find in them *very little* that is beyond the science and skill of an intelligent negro on any common plantation.

The notices which the Greeks have left us of their modes of culture are few and meagre.—There are certain facts connected with the growth of vegetables, which are likely to force themselves upon the attention of the most casual observer, and which were not neglected in the agriculture of this or any other ancient people.

1. The rankness of the grass and weeds just about the spot where some manure has fallen, may be expected to suggest to the most slovenly and careless farmer the application of the same substance to the roots of wheat or any other vegetable he may have under cultivation; as a pretty certain means of rendering the returns larger, of a better quality, and on both accounts more valuable. Hebrews, Greeks and Romans, seem therefore alike to have understood the effect of manures, though Hesiod, one of the most ancient of the Greek poets, whose works have come down to us, and who wrote expressly of agriculture, does not mention them at all.

2. When a pile of logs or a brush-heap is burnt in a field, the growth upon that spot will show that some influence has been exerted, or something has been liberated from the wood and deposited there, which is favorable to the increase of vegetables of every kind, whether wild or cultivated. This will naturally lead to the application of ashes as a manure, and of course with good results.

3. From the visible effects of the summer shower, we are naturally led to conjecture that

by supplying water in any other way, we may accomplish the same ends. This will be true, especially if we can direct a running stream from its course, and lead it along our cultivated fields. The great principles of agriculture, therefore, that were received, and the processes that were adopted and carried into practice by the ancients, were few in number.

1. The soil has to be loosened and mellowed by means of the plough or some other mechanical agency, before the seed is committed to it; and it is desirable that this stirring of the ground be renewed subsequently, whilst the crop is growing.

2. Other vegetables besides the one we are cultivating are to be rooted out, or the crop is to be kept clean. Solomon represents himself as having "passed by the field of the slothful, and by the vineyard of the man void of understanding; and lo it was all grown over with thorns—and nettles had covered the face thereof."

3. They understood the use of stable or farm-yard manure, though they do not appear to have valued it as highly as do the moderns.

4. They esteemed ashes as a manure.

5. They were aware of the beneficial effects of irrigation.

6. Finally, they were not wholly ignorant of what is accomplished by a judicious rotation of crops. Their method of fallowing differed from ours in one particular; it was extended through a longer period. The field that was to be sown in wheat in the year '57, was ploughed for the first time in the way of preparation in the fall of '56.

7. We learn from Pliny that the use of marl was understood, and its application practiced in France and Britain; whilst, if not unknown, it was at least neglected in Italy.

From agriculture proper, one of the authors before me, Varro, proceed to the subject of stockbreeding, to which he devotes eleven chapters.

1. On the origin and dignity of stock-breeding.
2. On sheep, rams and lambs.
3. On goats of both sexes and kids.
4. About the hog.
5. Concerning bulls and cows.
6. Concerning asses.
7. Of horses and mares.
8. Of mules of both kinds.
9. About dogs.
10. About shepherds.
11. Of milk, cheese and wool.

All this is, of course, very learned, and if any one of the company now here shall be pleased to enter upon the study of the Latin and read Varro, that he may learn over again what he knows already, I have only to say that this is a free country.

We will leave the ancients then, pass by the dark ages, and come down at once to comparatively modern times. Britain, the country of the ancestors of most of us, was long, like the rest of Europe, thinly peopled and badly cultivated. Even after the revival of learning, the business of farming was not at a higher level in regard to either theory or practice than amongst the ancient Greeks and Romans. The first considerable improvements were suggested by a man in whose views and plans for a better method of culture, truth and error were were strangely mingled. Down to his time nearly all crops had been sown broadcast, as the small grains are generally with us.

In 1731, or one hundred and twenty-five years ago, Jethro Tull published his treatise on horse-hoeing. He was an earnest and keen observer, and noticing the effect produced by a careful cultivation and the loosening of the soil, he drew the conclusion that the one and only thing required for the production of a good crop, beyond the mere eradication of the weeds, is to loosen the ground repeatedly—to keep it, in fact, always loose and mellow, so that the roots of the growing plants may easily penetrate it in search of the nourishment they require. He made small account of manure, almost the only use of which he represented to be to divide the terrestrial matter, which affords nutriment to the mouths of the vegetable rootlets, which end can be accomplished, he said, more completely and in a way in all respects preferable, by tillage. Tull begins by showing that the roots of plants extend much farther than is commonly believed, and then proceeds to inquire into the nature of their food. After examining several hypotheses, he decides this food to be fine particles of earth. It is necessary, therefore, not only to pulverize the soil by repeated ploughings before it is seeded, but as it becomes gradually more and more compressed and hardened afterwards, recourse must be had to tillage, or horse-hoeing, as he called it whilst the plants are shooting up, which also destroys the weeds that would deprive them of the nourishment that is in

readiness for them. His system of tillage was very much the same that has long been practised in this country in the culture of corn, and at a latter date of cotton, only he would discard manure altogether as too filthy a substance to be employed in the production of what is to be used for food; and he would apply the method or process of ploughing or horse-hoeing with some kind of coulter or cultivator to the crops, where each plant occupies a much smaller space than does a stalk of corn or cotton, as in the case of turnips and wheat. Of course, when the ground is to be stirred between rows which are so much nearer together, it becomes indispensable that those rows be perfectly straight and true, their distances from each other exactly equal, and that the whole business be conducted with the utmost care and precision. Tull contributed indirectly, therefore, to the neatness and beauty of the agriculture of Great Britain, and the perfection of the methods now in use there. The turnip crop, in particular, which receives so much attention there, thrives wonderfully under this kind of management, and if introduced into the smaller patches that are seen at this season of the year somewhere about every plantation in North Carolina, would have an excellent effect. With the same expenditure of manure a crop of equal goodness would be produced over a much larger surface, and we should have a better supply of an article on which to feed our wives and daughters during the winter. Tull represented a rotation of crops to be unnecessary at least, if not utterly useless.

Men of better sense and sounder judgment, discarding the whimsies of Tull, availed themselves of his reasonable suggestions. They continued to collect, preserve, and apply their manures as they had done before, and at the same time adopted his methods of careful tillage, and his great panacea for so many of the ills of agriculture, horse-hoeing, for those crops to which it is especially applicable. The farming of England underwent a gradual though slow amelioration. The great agent, the science that was to carry it forward to a perfection, the attainment of which had hitherto been regarded as impracticable, was as yet unknown—was yet to be called into being.

The origin of the modern chemistry dates no further back than a single century. In 1756. Dr. Black published his "Thesis de Magnesia Alba," in which he showed that, besides the air we breathe, there is at least one other kind with properties wholly different, and it became probable that there are many other such substances. Chemists entered with ardor into the new field of investigation that was in such manner laid open to them, and the constitution of vegetable matter became, so far as relates to the great facts and principles connected with it, pretty well understood. Vegetable fibre of every kind, as seen in trees, in grasses, and the other products of cultivation, is composed mainly of three substances, viz: oxygen and hydrogen, which are the constituent elements of water and carbon, or the coal that is seen at the blacksmith's shop. Water is present every where in a favorable season, so that we can very well understand, whence *that* is procured by vegetables of every kind. But with regard to the carbon, it is at first sight by no means clear whence it is that it comes. Take, for example, a field of corn at fodder-pulling time. There is a large burthen of carbon in it—in the stalks, the blades, and the ears. There is often very nearly, if not quite, as much carbon in the soil that late in the season as there was in the spring. From whence, then, has this constituent of the crop been derived? It was at length ascertained very fully by a long course of experiments instituted by different philosophers, between the years 1770 and 1800, from what source it is that vegetables are supplied with the larger part of the carbon they contain; that it exists in a state of combination, united to another elementary substance, in a gaseous state, diffused in small proportions through the atmosphere. This gas, or air, bearing the name of carbonic acid, is, so far as the wants and necessities of *animals* are concerned to be regarded as an impurity in the substance we breathe.—If it exceeds a certain proportion or limit, the air containing it becomes positively noxious and deadly. It is what is sometimes used, especially by females for the purpose of suicide in Paris and elsewhere. It is a product of respiration, of combustion, of the slow decay of animal and vegetable matter, and other agencies. It is absorbed by the leaves of the plants, decomposed under the influence of the light of the sun, the carbon retained for the use of the vegetable, and the pure, vital air, which is one of its constituents, given out. The leaves

with which the forests are clothed in summer have no other use or purpose so far as has been hitherto ascertained, than the accomplishment of these changes. The grove around the University furnishes an experiment on a large scale, illustrative and confirmatory of the truths that have just been stated. The soil contains almost no carbon under any form. The leaves, when they fall, at this season of the year, are mostly swept off by the wind during the winter, and what few remain are burnt at the opening of the spring. Yet the quantity of carbon in the trunks and limbs of the trees is evidently increasing from year to year. An additional, and it is by no means an inconsiderable quantity of carbon is accumulated in the leaves themselves, which, as has just been stated, are either swept off by the wind or burnt. There is no other source from which all this carbon can by any possibility have been derived but the atmosphere.

The effect of animal life, therefore, is to contaminate the air we breathe so far as its relations to their own healthful existence is concerned, and at the same time to charge it with nourishing food for vegetables; whilst on the other hand, vegetables rob the air of what is most grateful and congenial to their own appetites, and restore it purified and cleansed to meet the wants of the animal.

This was a prodigious step in advance in our knowledge of organized nature, revealing to us much in the economy of the vegetable and animal world which it was most desirable to know, and furnishing an explanation to a certrin extent of the uses of putrescent manures; but the information so acquired was with reason a good deal more prized by the vegetable physiologist than by the agriculturist. Indeed, the latter cared but little for it; he could make very little use of it.

[TO BE CONTINUED.]

CUCUMBERS.—The Maine Cultivator says—"When a cucumber, is taken from the vine, let it be cut with a knife, leaving about the eighth of an inch of the cucumber on the stem; then slit the stem from the end to the vine, leaving a small portion of the cucumber on each separate slit there will be new cucumbers as large as the first. Those wishng to raise large quantities of this article or pickles will do well to try the experiment."

The Draining of Inland Swamps.

BY ANTÆUS.

"A Planter" in the June number of "*The Agriculturalist*," having expressed a desire to see published the Bill introduced in the Senate by Mr. Mazyck, at the last session of the Legislature, to promote the draining and improvement of Inland Swamps, I herewith present the main features of the bill, with such reflections as its consideration may suggest.

The first section, as it is the most important, and cannot be well abridged, I give entire, to wit:

Be it enacted, &c., That whenever two-thirds or more of the proprietors of the lands lying in any island swamp, shall associate themselves together by written articles of agreement for the purpose of draining and improving the same, they shall thereupon become and be a body corporate for the purpose afore-said, by the name of "The Proprietors of said Swamp," designated by the name by which it is commonly called and known; and shall have power and authority to make and ordain by-laws for the regulation and government of such corporation, not inconsistent with any law or statute of force within this State; and to make such assessments of money and labor on the members of the corporation as may be requisite for carrying into effect the object thereof.

The second section prescribes the mode of proceeding in cases where it is necessary to make or construct any water-way, ditch, dam, &c., on the land of any person, not a member of the corporation, whose consent cannot be obtained; which is as follows: The corporation is first to apply by petition to the Court of General Sessions and Common Pleas of the District in which such land is situated, setting forth the facts of the case, and praying that Commissioners be appointed by the Court to ascertain and assess the value of the land which would be occupied by such works. and also the amount of loss or damage which the making or construction thereof would cause to the owner of the land. Upon the hearing of the petition, if no objection be made by the owner of the land, the court shall appoint three commissioners for the purpose aforesaid. If objections be made, however, by the owner of the land, and affidavit be made by him that it is not necessary for the draining and improvement

of such swamp, that any ditch, &c., should be made on said land, the issue so made shall be submitted to a jury, and if the finding of the jury be for the defendant, no commissioners shall be appointed; but if for the petitioners, commissioners shall be appointed, and proceed as above directed. The privilege of moving for a new trial allowed either party. If the valuation and assessment made by the commissioners be not acceptable to either party, appeal may be taken, and the Court shall cause a new valuation and assessment to be made by a jury, and their verdict shall be final and conclusive unless a new trial be granted.

The third section enacts that if any person, not a member of the corporation, shall use any canal, ditch, &c., for the purpose of draining, or in any way drawing profit from land owned by him in said swamp, he shall be liable to pay to the corporation such reasonable rent therefor as they may demand, not exceeding one-third of the clear annual value of the land.

The fourth section renders the lands of the corporation liable for all debts. Where the land of any member of the corporation shall be taken in execution and sold to satisfy any judgment or decree against the corporation, the person whose land shall have been so taken in execution, and sold, shall be entitled to receive, as compensation therefor, by contribution from the other members of the corporation, the value thereof.

Section fifth declares any person having a legal or equitable estate in fee, or for life, in land lying in any inland swamp, a proprietor or owner of such land for the purposes of the act. Where such person shall be an infant, married woman, idiot or lunatic, the guardian of such infant, the husband of such married woman, &c., shall be deemed the proprietor. *Provided*, that application be made to the Court of Chancery for leave, and leave be granted.

The sixth section defines Inland Swamps to embrace all swamps except such as are commonly called river swamps, river bottoms, or river margins; and the seventh section (the last) requires every corporation formed under the provisions of this act, to have a Chairman and Secretary, and to keep regular minutes of its proceedings.

The immense benefit that would accrue to the agricultural interests of the State, could all of the various Inland Swamps which lie within her borders be brought into successful cultivation, will be readily admitted by all, for they unquestionably embrace our most productive lands; and it is equally evident that for the attainment of this object, some general law on the subject is necessary. Without some such law, unanimity among the proprietors of a swamp would be requisite, and as it would be a difficult, if not an impossible matter to obtain this, one obstinate man, or one deficient in energy or enterprise, might defeat the wishes of all the rest. No law that I can conceive of, could be more just or wholesome in its operation, or more unobjectionable in all of its details, than one of the character of the bill which I have just briefly sketched. The number of proprietors of a swamp which is required to be associated together before they can become a body corporate, is a constitutional majority—two-thirds—a majority on which our government, both State and Federal, is based; and the amount of lands which must be owned by them is the same. This is a safe proportion, and leaves the minority without any ground of complaint. The powers granted to it are no more than are necessary for its efficient operation, and the rights of individual members and of disinterested parties owning lands in or adjacent to the swamp, are amply protected.

The failure of the passage of the bill was not owing to any objection to, or defect in, the bill itself, though probably it may require alteration to suit the different portions of the State, but it must be ascribed partially to the cause assigned by a "Planter," viz: the great press of business upon the Legislature, and partly to the thrusting forward of two amendments, the one extending the operation of the bill to river swamps, and the other making all the lands lying within any river swamp, and belonging to persons refusing to become members of the corporation vest in the corporation upon their paying such assessed value to the owners of the lands.

The members of the House—in which body these amendments were offered—were not acquainted with the principles which should govern the drainage of river swamps, and it was too late in the session—only two days before adjournment—to enter into a discussion of them. The bill had passed two readings in the Senate without debate, and had been sent to the House for concurrence; it had been reported on favorably by the Committee on Agriculture, and would doubtless have become a law had it not been for the above mentioned causes. We wish it better success at the next session of our Legislature.

THE CAROLINA CULTIVATOR.

RALEIGH, NOVEMBER, 1856.

Notice.

Prof. B. S. Hedrick, who, for the last eight or nine months has been employed by the Proprietor of this paper, as Agricultural Editor, having, *for reasons known to the public*, been disunissed from his post as Professor of Agricultural Chemistry in the University of North Carolina, will not be any longer connected with the "Carolina Cultivator."

Since the above Notice was in type, we have received the following letter from Professor Hedrick:

Chapel Hill, October, 1856.

Wm. D. Cooke, Esq.: Dear Sir—I have sent you no editorial matter for this number of the "Cultivator," supposing that in the present condition of things my longer connection with the Cultivator would do more injury than good.

The chief object I have had in view was to benefit the cause of Agriculture in the State by diffusing a correct knowledge of its principles. I regard the Agricultural Press as one of the most efficient means of doing this, and therefore would in no manner seem to compromise its interests by making them bear what does not belong to them.

My only wish in parting is, that you may succeed in making the Cultivator all that its friends would have it to be. May the farmers of the State have an unlimited prosperity, for the farming interest in our State must take the lead in developing all the wealth and greatness which the Old North State is yet destined to attain.

I remain as ever,
Yours truly and respectfully,
B. S. HEDRICK.

Look at Edwin Allen's advertisement of Choice Peach Trees.

North Carolina State Fair.

The Fourth Annual Fair of the State Agricultural Society was held during the third week of October. Owing to the very favorable arrangements made with all the Rail Roads leading to Raleigh, (with the exception of the Petersburg Rail Road) to transport all articles for exhibition free, and passengers at half price, there was a much larger number of Agricultural Implements—also of Stock, than has ever before been on exhibition—Agricultural Implements were exhibited by J. Montgomery, of Baltimore, Md., J. Stafford & Co., of Chatham Co., R. Sinclair, Jr. & Co., of Baltimore, Md., R. R. Hudnall, of Wake Co., J. F. Cuthrell, of Davie Co., J. H. Carlisle, of Halifax Co., Tappey & Lumsden, of Petersburg, Va., W. B. Williams & Co., of Warren Co., J. W. Davis & Bro. Petersburg, Va., Samuel Rowland, of Wake Co., E. Whitman & Co., of Baltimore, Md., J. L. Horn, of Edgecombe Co., Dickson & Lynch, of Orange Co., Webb, Dickson & Co., of Orange Co., Alexander Dickson, of Orange Co., Borum & McClane, of Norfolk, Va., J. M. Towles, of Wake Co., H. Witherspoon, of Wake Co., D. C. Richardson, of Warren Co., C. Burnett, of Granville Co., Cresson, Stuart, & Peterson, of Philadelphia, Penn., and J. G. Cooke, of Cumberland Co.

The stock on the grounds was much superior to that exhibited at any previous Fair. Since the establishment of the State Fair, there has been a very perceptible improvement in the stock of the State, and we have no doubt, this will continue to be the case. We heard several gentlemen say that they were determined to bring something next year still superior to what they had at the present Fair.

Mechanics' Hall was not as well filled as we have seen it at some of the previous exhibitions.

Planters' Hall was well filled with good articles.

Floral Hall, which has been very much enlarged, was better filled than we have ever seen it before, and the articles exhibited were of a much finer quality of work than what has been heretofore offered. Among the numerous articles in this Hall, it is impossible to speak of each separately. By reference to the Premium List, it will be seen which were considered the best. We cannot refrain from noticing,

particularly, some needle work, knitting and netting, executed by some of the blind pupils of the North Carolina Institution for the Deaf and Dumb and Blind. One of the articles, was a childs' frock, made entirely by Miss Rebecca Trull, who is perfectly blind. The proficiency of the pupils in this department reflects great credit on their teacher, Mrs. S. G. Waddell.

We were pleased to see that some of our Merchants were disposed to add to the interest of the exhibition, by preparing beautiful cases of their fine articles. Messrs. W. H. & R. S. Tucker, H. D. Turner, Williams & Haywood and Charles Thompson, each had very fine cases containing Laces, Embroidery, Ribbons, Fancy Articles, Silver Ware, Medicines, Perfumery, &c., &c.

In another column will be found the able address of Prof. E. Mitchell, delivered at the Fair grounds on Friday.

The attendance on the Fair was not as large as on former occasions, which was caused by the extremely bad weather. A regular North east storm commenced on Tuesday and continued until Saturday.

We give below the proceedings of the meetings of the Society, held each evening in the Commons Hall.

Proceedings of a Called Meeting of the N. C. State Ag. So.

Raleigh, Monday Oct. 13, 1856, 7 1-2 p. m.

A Called meeting of the society took place in the Commons Hall, the President, Hon. Thos. Ruffin, in the chair.

On motion, Jno. C. Partridge was appointed Secretary, *pro tem.*

The president stated that the object of the Called meeting was to facilitate the arranging of the list of Judges for awarding premiums.—The list of Judges appointed by the Executive Committee was then called, and the request made that all the Judges, present or in the city, would report themselves to-morrow by 12 o'clock, at Reception Hall.

On motion, the Society then adjourned.

Proceedings of the Annual Meeting of the Society.

Raleigh, Oct. 14, 1856, 7 1-2, p.m.

The Annual Meeting of the Society took place this evening; the President, Hon. Thos. Ruffin, in the chair.

On motion, Jno. C. Partridge, was appointed Secretary, *pro tem.*

The President, who is *ex-officio* chairman of the Executive Committee, announced that in accordance with a resolution of the Society, passed at the last Annual meeting, the Executive Committee had appointed a Secretary who had kept a record of the proceedings of the Committee: that the Secretary was present, and would read them if the society desired it. The reading was dispensed with, and the records laid on the table for examination. The Society was then ably addressed by Prof. Emmons, State Geologist, on the importance of improving the Stock of the State, and the advantages of Soiling, in producing manures, and increasing the products of the dairy.

The meeting was also addressed by Maj. C. L. Hinton, of Wake, Edmund Ruffin, of Va., R. R. Bridgers, of Edgecomb, and T. P. Devereux, of Halifax, on the subject of composting: and on the necessity of rotation or alternation of crops, and on the great benefit to be derived from the pea crop.

The list of Judges to award premiums was read. On motion of R. H. Smith, of Halifax, a committee consisting of R. H. Smith, Maj. C. L. Hinton, and Dr. Wm. R. Holt was appointed to take into consideration the expediency of changing the time of holding the Annual Fair, to report to-morrow evening.

J. W. Norwood, of Orange, gave notice that he would introduce a resolution, to-morrow evening, on the subject of horizontal ploughing and hillside ditching.

On motion the Society adjourned to meet again to-morrow evening.

Wednesday, Oct. 15, 7 1-2 o'clock.

The Society was called to order by the President, and Jno. C. Partridge appointed Secretary, *pro tem.* R. H. Smith, from the Committee appointed to take into consideration the expediency of changing the time of holding the State Fair, reported in favor of changing the time, from the second, to the *Third Tuesday* in October.

A question arising as to the votes required to alter the Constitution, the Report was laid on the table to afford time to send for a copy of the Constitution of the society.

On motion of R. H. Smith, Edmund Ruffin,

Esq., of Va., was elected an honorary member of the Society.

On motion, the Society proceeded to the election of officers for the ensuing year, which resulted in the election of the following officers—

Hon. Thos. Ruffin, of Alamance, President.
J. S. Dancy, Edgecombe, 1st Vice-President.
R. H. Smith, Halifax, 2d " "
Dr. W. R. Holt, Davidson, 3d " "
Hon. W. A. Graham, Orange, 4th " "
J. F. Hutchins, Wake, Treasurer.
Jno. C. Patridge, " Secretary.

The report of the Committee on changing ing the time of holding the Fair, to the Third Tuesday in October, was taken up, and after considerable debate was adopted.—Yeas 31, nays 25.

J. W. Norwood, of Orange, in accordance with a previous notice offered the following resolutions—

1. *Resolved*, by the North Carolina Agricultural Society, That the Executive Committee prepare a tract, in which plain, practical instruction, shall be given upon the method of horizontal ploughing and hill-side ditching.

2. *Resolved*, That the Committee lay that tract, together with a suitable memorial to be drawn up by them, before the Legislature at their next meeting at as early a day of the session as possible, in which they shall pray the Legislature to grant them an appropriation in money sufficient to enable them to publish the tract, and place a copy of it in the hands of every owner of land in the State of North Carolina.

After some discussion, R. H. Smith, of Halifax, proposed the following as a substitute for the resolutions which was accepted by Mr. Norwood, and unanimously adopted—

Resolved, That the Executive Committee of this Society offer, in their next List of Premiums, a sum not less than fifty dollars, for the best Essay on The Methods of Horizontal Ploughing and Hill-side Ditching.

On motion the Society adjourned to meet to morrow evening.

THURSDAY, OCT. 10, 7 1-2 P. M.

The Society met, the President, Hon. Thos. Ruffin in the chair.

The President announced the following committees for the ensuing year, viz:

Executive Committee—Jno. S. Dancy, of Edgecomb; R. H Smith, Halifax; Maj. C. L. Hinton, Wake; Robert A. Hamilton, Wake; Wm. H. Jones, Wake; Paul C. Cameron, Orange; Wm. R. Poole, Wake.

Committee to Incite a Speaker to Deliver the Address at the next Fair—Dr. E. A. Crudup, of Franklin; R. A. Hamilton, Wake; W. R. Holt, Davidson.

Jno. S. Dancy, of Edgecomb, offered the following resolution, which was adopted—

WHEREAS, It has been ascertained from experience that the Executive Committee, as now constituted, is too small for effective purposes, particularly during the week of the Fair, be it resolved that the Constitution be so altered that the President be required to increase said Committee from seven to ten, and that five of them be a quorum for the transaction of business.

In accordance with this resolution, Wilson W. Whittaker, of Wake; W. A. Eaton, Warren, and Wm. R. Holt, Davidson, were appointed on the Executive Committee.

T. P. Devereux, of Halifax, offered the following resolution which was adopted—

Resolved, That the Constitution be amended as follows: That any person who will contribute the sum of twenty dollars shall be a member of this Society for life; and that the fund constituted by such subscriptions be invested by the Treasurer under the direction of the Executive Committee as a permanent fund, the annual interest whereof shall be applicable to the payment of premiums, and the other ordinary expenses of the Society.

C. L. Hinton and D. W. Courts were appointed to audit the Treasurer's accounts.

Two vols. of Essays on Calcarious Manures, and Agriculture, were received from the author, Edmund Ruffin, Esq., of Virginia.

T. P. Devereux, of Halifax, offered the following resolution, which, after considerable debate, was adopted—

Resolved, That hereafter the legislative powers of the Society be committed to the Executive Committee—the said committee reporting all their acts to the first general meeting of the Society, and such proceedings shall stand as laws of the same unless then otherwise ordered: *Provided, nevertheless*, That nothing in this resolution contained shall be so construed as to deprive the Society of the power of originating legislation.

The President called to the notice of the Society, the following letter of Dr. Elwyn with the introductory remarks of Dr. Gibbon of Mecklenburg Co., and desired that it should be placed on the records of the Society:

At the meeting of the Scientific Association in Albany, this summer, some private conversation ensued upon the comparative merits of

the grains grown in the West, North and South. It was observed that Southern flour had largely the preference in the West Indies and South America, on account of its being dryer and keeping better in hot climates.

A gentleman who attended the World's Fair in London, at once remarked that the finest flour he ever saw was made of North Carolina wheat, and ground at mills in New York.—Being solicited to submit the observation to writing, Dr. Elwyn, of Philadelphia, well known for the interest he takes in agriculture and everything connected with the useful arts, at once drew up a certificate, of which the ensuing is a copy:

"I have been desired, by Dr. Gibbon of North Carolina, to record the following fact as interesting to the wheat growers of that State. While acting as chairman of the committee 'on articles used as food,' during the exhibition at the Crystal Palace, I was struck with the quality of the bread offered for examination by Hecker & Brother of New York. It was the whitest and best I ever saw. I asked—being a farmer—the very natural question, as to where they procured their grain; and was told that the bread was made of flour from North Carolina wheat; and to my further astonishment, was also informed that, in their opinion, the best wheat in the United States was that of North Carolina.

(Signed.) A. L. ELWYN.

Albany, N. Y., August 25, 1856.

Jno. S. Daney, of Edgecombe, offered the following resolution which was unanimously adopted—

Resolved, That the thanks of this Society are due and are hereby tendered to the Wilmington and Weldon Railroad, the North Carolina Railroad, the Raleigh and Gaston Railroad, the Seaboard and Roanoke Railroad, and the Roanoke Valley Railroad, for the facilities afforded in transporting stock and implements on their several roads free.

The President announced the following gentlemen as Marshals and assistants for the next Fair:

Marshal—Gen. Jos. B. Littlejohn, of Franklin.

Assistant Marshals—Col. E. P. Jones, of Caswell; Col. G. W. Watson, Johnson; Simon G. Hayes, Granville; Albert Hinton, Wake; Dr. S. A. Williams, Granville; H. A. Dowd, Wake.

On motion, the Society adjourned to meet tomorrow evening.

FRIDAY OCT. 17, 7 1-2 P. M.

The Society met pursuant to adjournment, the President in the chair.

K. Rayner of Hertford offered the following resolution which was unanimously adopted—

Resolved, That the thanks of the State Agricultural Society are due, and are hereby tendered to Prof. E. Mitchell, for the very able and instructive address this day delivered by him; and that five hundred copies of the said address be printed and distributed under the direction of the Executive Committee—one copy to be sent to each member of the State Agricultural Society.

Agreeably to an invitation from the Executive Committee, the Society was ably addressed for about an hour and a half, by Edmund Ruffin, Esq.

Mr. Ruffin, after touching upon the great importance of all matters tending to the general advancement of practical agriculture, spoke of the high degree to which it may be raised in North Carolina, and the ample means at her disposal to that end. He then went on to allude to some of the obstacles to her advancement. The low, flat grounds of the State were averse to agriculture—for the most part they were worthless. Some of them, if properly drained, might be reclaimed with great profit. A second quality of land, he said, had a deficiency of lime, which must be supplied to render it useful. He then pointed out the availability of lime and marl, for every purpose required. A third obstacle, which he designated an evil, produced by man himself, and which could and must be removed if progress is to stamp our career, is our system of overtaxing the land, and our almost total disregard of the proper rotation of crops. He would not say what crops should follow each other; but the pea crop, which is peculiarly adapted to our State, was perhaps the greatest improving crop that could be used.

Having taken a general view of these obstacles and the remedies, where such can be applied, Mr. Ruffin proceeded to remark in detail upon some of them. He first took up the question of drainage, as applied to swamp lands, which he divided under two heads—low lands and low firm lands. These low firm lands, he said, required more draining than any other. About two feet below the surface will be found a layer of sand saturated with water. In proof of this he instanced the wells dug in the lower counties, in which the water rises *above* the

strata of sand. This is caused by the pressure upwards of the water of the strata. And this continual uprising of the water keeps the soil above saturated. It is usual to attribute this condition of soil to *stiff land*. This was a mistake. It is, in fact, quite the reverse, and is inseperable from the causes above alluded to. Land in this condition cannot receive the water, as it contains already as much as it can hold. Superficial draining does remove the superficial water; but the *underglut* must be got rid of if any benefit to the land be looked for—the sand beds must be drained, and then the surface water will take care of itself. For this purpose *deep ditching* must be resorted to.—Mr. Ruffin proceeded to give some very interesting and instructive experience on this point, in the course of which he hinted at a theory of his own regarding quicksands. Many years ago he commenced running a deep ditch through a large tract of his low grounds. His borings fully justified his belief in the underglut of the sand beds, as he found in almost every instance where he penetrated the bed, a copious flow of water upwards—in land, too, where a spring was never known to be. In his progress he was frequently interrupted by quicksands, which much retarded the work. He passed on over these places, but returned to them the following year; and then he found that what before was quicksand had now become hard sand.—This he continued year after year, and each succeeding year he gained depth by his hardening process. This proved that quicksand is nothing more, in these cases, than sand saturated with water; and that by draining, its character is thus changed. The final result exceeded his most sanguine expectations, and he succeeded in reclaiming his land—proving, at once, the existence of these undergluts, and the certain remedy of deep ditching.

His second great division was the swamp lands, and these he subdivided under two heads—land of a firmer kind, and bogs. The former of these he regarded as almost useless; and the principles applied to those just noticed might be said to apply to them. The peat lands, he remarked, are found to be lower than swamp land; and the interior of swamp lands is found to be higher than the outer portions; and lakes in swamps are found to be the highest portions of them. These lakes, no doubt, resulted from fire. He proceeded, at a considerable length, to show the general uselessness of attempting to reclaim these peat lands, on account of the great expense attending the process, and then alluded to the policy of the State in regard to them. He believed that the State had not received the slightest advantage from her policy of the last eighteen years. During that period these lands had remained as so much dead capital. Had she given them away, some good might have resulted to her revenue, the sanatary improvement of the State, or the physical condition of her people Or if she received *nothing* by that course, it would be doing as much as she *has* done. He could not tell what would be the result of the next eighteen years. But he was clearly of opinion that she should investigate this matter, as regards their title, topography and the physical condition. Then the people might know what they were about in the purchase of them. The best means should be adopted to bring them into use.—Give them away, if necessary, on the condition that at least a portion of them be brought into use. If something is not done they will remain a seedbed of pestilence, affecting materially, as they are now doing, the character of the State as regards health.—With proper drainage, &c., lower North Carolina may be made as healthy as lower Virginia now is, and that is as good as needs be, and was produced by similar means. This is necessary, as the formation of our coast prevents the junction of salt and fresh water, so needful to health.

The speaker then returned to the peat lands, to show how rapidly they increase, by the decomposition of vegetable matter—elevating the body and extending the sides, to an incredible extent—and stated that but for the wants of man for fuel, the increase would be astounding. It was self-evident, that the greater the increase of turf, the greater the quantity of water it will hold.

He then took a general view of the calcarious matter in lands. The Marls were extensive and very rich in North-Carolina. In addition to the marls, abundance of lime could be obtained. In reference to this latter fertilizer, he remarked upon the quantity used from Thomaston, at fully five times the cost required to produce it at home. He alluded to the importance of lime, and showed the results in his own State, which has been prospering under its

effects, in even a greater ratio than that in which it formerly declined, and then asked why North Carolina should not avail herself of such accessible advantages. In the course of his remarks on this branch of the subject, Mr. Ruffin paid a high compliment to the farmers of Edgecombe.

The third branch of the question was now taken up—rotation of crops, &c.—and in this particular even the Edgecombe farmers were at fault. The continuation of one kind of crop he believed to be the cause of much of the disease in crops and of existence of insects.—Change the crops—the more extreme the change the better. Not to the same description of crop; for insects in one kind of grain will be apt to trouble another kind. But change, say from corn to cotton, from cotton to peas, &c.—Mr. Ruffin then gave the results of his own experience in this matter, showing the best possible results. In the rotation of crops he showed that lower and middle North-Carolina having a more advanced spring, &c., could profit much more than he had done by it. He thought that peas would be found, as an improver and cleanser, much more advantagous than clover; and with the pea, we need be at no loss for rotation. His own experience convinces him, that cotton does better after peas.

His remarks applied more particularly to lower North Carolina. He had seen but little of the the upper and middle portions. From what he had seen of the middle he thought it wanted lime, as in the case of middle Virginia. He also spoke of the uses and effects of plaster, and showed how it could be procured cheaply.

He concluded by exhorting the members of the North-Carolina State Agricultural Society, to look to and foster their institution—to concentrate their efforts upon that one point, and not squander them upon less important ones.

In response to questions from Dr. Holt, Prof. Emmons entertained the meeting with some valuable information on the condition of the land in the different sections of the State, and on the available supply of fertilizers for its improvement.

Jno. S. Dancy, of Edgecomb, offered the following resolution, which was unanimously adopted—

Resolved, That the thanks of this Society are due and are hereby tendered to the ladies, who have given their valuable assistance in Floral Hall during the present Fair.

Maj. C. L. Hinton offered the following resolution which was unanimously adopted—

Resolved, That the thanks of this Society are due and are hereby tendered to Mr. Edmund Ruffin, for the very interesting and instructive address delivered by him this evening.

The President addressed a few words to the meeting; and then, on motion, it adjourned to the Third Tuesday in October next.

JNO. C. PARTRIDGE, *Sec'y*.

MORGAN HORSES.—We desire to call the attention of our readers to the advertisement of C. M. Saxton & Co., in our advertising columns, to a Premium Essay on the Origin, History and Characteristics of these remarkable Horses. It will be seen that the work gives practical directions for training them for Exhibition at Agricultural Fairs.

Exchanges.

The *Eclectic* Magazine for August and September, was received since our last notice. The reading in each number is well selected, and the embellishments, as usual, beautifully executed.

The *Knickerbocker* for the last month is on hand with its usual variety of light articles and pleasant editorial chit chat.

The *Southern Literary Messenger* for October is an excellent number. It appears to be fraught with much entertaining reading.

The "*African Repository*" for the same month, deserves notice as a fair number of this useful little advocate of the Colonization cause.

Godey for November is of course beautiful and elegant, needing no new commendation at our hands.

Graham, also for November, has been received with pleasure. Supurb as usual.

"DICKENS' HOUSE, OLD WORDS," for November, is rich in varied reading. The articles are short and light, but entertaining.

We have also received, just before going to press, the November Nos. of PUTNAM and the KNICKERBOCKER.

Cracks in stoves may be effectually stopped by a paste made of ashes and salt and water. Iron filings and sal ammoniac make a still harder and firmer cement.

COOKE'S NEW MAP OF NORTH CAROLINA.—In the List of Premiums awarded at the late State Fair, a report on Cooke's New Map of North Carolina is published, which is not complete. The Executive Committee of the State Agricultural Society requested Professors, Emmens and Mitchell, to prepare the report. Prof. Mitchell having left for Chapel Hill, his report was delayed in the mail and after it was received, was mislaid and another copy sent for. We now publish the joint report as it should appear in the List.

Guion's Hotel October 20, 1856.

To JNO. C. PARTRIDGE, *Secretary of the North Carolina Agricultural Society.*

SIR:—I have had frequent opportunities of testing the correctness of Mr. Cooke's new Map of North Carolina, and parts of the adjoining States. This Map is worthy of special notice: 1st, from the fact that it embraces those parts of Virginia, South Carolina and Tennessee which are of immediate interest to the citizens of this State. 2d, that the eastern part of the State is compiled from data obtained through the determinations of the Coast Survey. 3d, it contains an entirely new feature in its *profile* extending along the line of the Railroad survey from Goldsboro' to Ashville, which exhibits the heights of many interesting points, as well through the central and western parts of the State lying east of the mountains as amongst the mountains themselves.

In addition to the foregoing it may be justly said that Mr. Cooke has taken unwearied pains to correct the geography of the different counties, and to insert the prevalent names of places, those for instance which have come into use since new lines of travel have been established. It is in fact a New Map, and the only map which can be relied upon for accuracy in its details. It moreover merits commendation for the artistical skill displayed in its execution, its typography being beautiful and distinct.

Most truly yours,
EBENEZER EMMONS,
State Geologist.

IN the encomium passed by Prof. Emmons, upon Mr. Cooke's new Map, I fully concur.—The particulars mentioned by him are of first rate importance and interest. Most of the maps of the State, heretofore published, have furnished few, if any, indications of the position of any point within our own limits, with regard to the States, north, south, or west of us. This evil has now a remedy. In noticing the map, the very efficient and important aid, in its construction, so fully afforded by Prof. A. D. Bache, Superintendent of the United States Coast Survey, and by Col. Gwinn, having the management of the Survey of a railroad, carried over the Blue Ridge into the valley of the French Broad, should not be passed in silence. Only the portion of the map representing the eastern part of the State has been submitted to my inspection, but to this I presume, the rest will be made to correspond.

E. MITCHELL.
University of N. C., Oct. 21, 1856.

THE HUMORS OF FALCONBRIDGE.—T. B Peterson, No. 102, Chesnut st., Philadelphia, has in press, *to be ready for sale by all Booksellers, on Monday, Dec.* 6, a book with the above title by the late Jonathan F. Kelly, complete in one large duodecimo volume, beautifully illustrated, neatly bound in cloth, for $1 25; or in two volumes, paper cover, for $1. From a hasty perusal of thirty-two pages of the work, we have no doubt this volume will have a large sale. Mr. Peterson has generously undertaken the publication of this work, without regard to profit, for the sole benefit of the family of "Falconbridge," who have seen better and happier days. Advance copies of either edition of the work, will be sent *at once* to any part of the United States, free of postage, on remitting the price of the edition they may wish, to the publisher in a letter.

For the Cultivator.

Chatham C'ty N. C.
Oct. 9th 1856.

MR. EDITOR:—Dear sir, at your request I will write what I have found to be an excellent mode of putting away sweet Potatoes.

We prefer letting them remain in the ground until the vines are killed with the frost, (I do not mean the leaves.) And as soon as the vines are killed, dig the potatoes, sorting them nicely and putting those that are bruised and cut to themselves for immediate use. The good ones placed where we make what we call the Hill, having the ground first thrown up a little and leveled and a goodly portion of litter spread over it to keep them from being affected

by the moisture of the earth: wheat straw will do—pine straw is better. 50, 75 or 100 bushels of potatoes may then be piled on, not having been sunned any more than can be helped.—Cover with straw to the thickness of a foot or two, and an additional layer of cornstalks or pine bark and potato vines to hold on the dirt, and then dirt piled on, in abundance, protected from rain and other carnalities, having a ditch to convey the water away so as not to stand around them. And if you have the luck that I have had your potatoes will be sound and good when you go to examine them, if not until March or April. Perhaps I should give a reason for putting them away so close and tight. It is on the same principal that fruit is kept in air-tight cans, it is to prevent the action of the atmosphere on them. We know a post set in the ground will decay near the top of the ground while it is perfectly sound deep in the earth. The abundance of straw is necessary to prevent the moisture from the potattoes, falling back on them which will cause them to spoil very quick.

If there is any thing in the above of use it is at your service.

A FARMER.

Railroads and Agricultural Exhibitions.

In some States of the Union, Railroad Companies are very liberal during the season of Agricultural exhibitions, carrying visitors for half price, and live stock, farm products, agricultural machinery, and other things intended to be placed regularly upon show at the Fairs, altogether free of charge. This, though praiseworthy on their part, we have never doubted, was even a greater advantage to them than to the great interest which it is their desire thus to promote.

In some sections, however, where commercial perceptions have not been quickened by much experience, or where a pre-determined dullness rules because it has made up its mind to do so, it is hard to convince the railroad companies that a liberal policy towards the several classes of persons interested in getting up agricultural fairs, and exhibiting live stock, field crops, improved machinery, domestic manufactures, &c., before the thousands who always attend such collections of the rural population, is a just and wise policy towards themselves. Yet we have no more doubt of this, than we have of the existence of Agricultural Societies.

No other State in the West has so many railroads as Ohio, and perhaps the experience of no other has been so great with Agricultural Fairs, and all the circumstances that attend them. The practice in that State therefore seems to be one upon which her sister States might rely with much confidence, in reference to the same matter. Wishing to understand exactly what was customary there, we a short time ago addressed a letter to a prominent officer of the State Board of Agriculture of Ohio, making very particular inquiry upon the subject. The following is the main body of his reply—

"The success of your State Fairs, you may depend, will hang upon the contingency of carrying stock and other articles for exhibition *free of charge*. The simple fact is, *they cannot be kept up without free transport*—that is, free transport of things intended for exhibiton, and which shall not be sold at the Fairs, or on their way to or from the same.

"Our railroads make large profits by carrying people at half fare—some companies having realized $10,000 over and above the usual profits in the same length of time. As near as we can learn, the extra profits on leading roads have ranged from $6,000 to $10,000 during Fair Week. The benefits are mutual between the railroad companies and the farming interest; but in so far as direct pecuniary gain is concerned, the former have the largest share of the advantage.

"For 1855, the railroad companies here attempted to institute a new order of things, by resolving to charge half freight upon stock and articles; but at the eleventh hour, discovering that no Fair would be held, they came forward in special convention and declared that they could not afford to part company with the customary annual gathering—promptly restoring the necessary regulations, and acting that year with greater liberality than ever before—all their employees seconding their efforts, at the time of the fair, and thus doing away with the usual prejudice against railroads, and against traveling to large gatherings."

"This," concludes the writer, "is a very gratifying state of things, and will do the railroad companies and our enterprize great good during the coming Fair."

The true policy of both parties, we have not a doubt, is that which is pursued in Ohio. It is liberal to the farming and manufacturing classes, and, since it pays better than the opposite policy, of course, just to the railroad companies.—*Western Farm Journal.*

MEN OF AMERICA—MEN OF THE AGE.—The greatest man, "take him all in all," of the last hundred years, was George Washington—an American.

The greatest Doctor of Divinity, was Jonathan Edwards—an American.

The greatest Philosopher, was Benjamin Franklin—an American.

The greatest of living Sculptors is Hiram Powers—an American.

The greatest living Historian is William H. Prescott—an American.

The greatest ornithologist, was J. J. Audubon—an American.

The greatest Medical Chemist of modern times, Dr. J. C. Ayer—inventor of *Ayer's Cherry Pectoral and Cathartic Pills*—is an American.

The greatest Lexicographer since the time of Johnson, was Noah Webster—an American.

The greatest inventors of modern times, were Fulton, Fitch, Whitney and Morse—all Americans.

WONDERFUL, BUT TRUE.—A few days since, Mr. Jas. H. Beadle, of Huntsville, Alabama, called on us and gave us permission to publish for the benefit of suffering humanity, the astonishing cure which had been effected in the case of his wife by the use of Dr. Hance's Vegetable Epileptic Pills. He informed us, that at the time his wife commenced using the medicine, her system was so entirely prostrated, by the number of spasms she had undergone, as to reduce her weight to 100 lbs. Since she has been taking the pills, she has entirely got over the spasms and has gained in weight and bodily health. She now weighs at least 200 lbs., and declares she is in better enjoyment of health than ever before in her life. Mr. Beadle also related the case of Mr. Harrison Lightfoot of the same town, who has been entirely cured of the worst form of Epilepsy by these same pills. Mr. Lightfoot's case was so bad that he never passed a week without having an attack, often falling down in the street. He has not had an attack for more than a year. Mr. Beadle thinks that if the pills ever fail in curing a case, it is for the want of a proper preserverance on the part of the person in taking them; as he feels assured from observation in the case of his wife, that if they are taken for a sufficient length of time, they will cure any case. Sent to any part of the country by mail, on the receipt of a remittance. Address SETH S. HANCE, 108 Baltimore street, Baltimore, Md. Price, one box, $3; two, $5; twelve, $24.

A GREAT BLESSING TO THE AFFLICTED.—The number and formidable character of diseases of the Liver have long challenged the attention of medical men. Some of these diseases, classed under the general term of Consumption, have been supposed incurable and the unhappy patient allowed to die, without medical science to offer him a hope of recovery. Happily this can no longer be the case. A remedy has been found which will cure all complaints, of whatever character, arising from derangement of the Liver. The Pills discovered by Dr. M'Lane, of Virginia, act directly on the Liver, and by correcting its operation and purifying it from disease, cuts off and extirpates the complaints which have their origin in the diseases of this organ. Remedies hitherto proposed for liver complaints, have failed to operate upon the seat of the disease; but Dr. McLane's Pills make themselves felt upon the action of the Liver, and by cleansing the fountain, dry up the impure streams of disease which thence derive their existence.

☞ Purchasers will be careful to ask for **Dr. M'Lane's Celebrated Vermifuge, manufactured by Fleming Bros. of Pittsburgh, Pa.** All other Vermifuges in comparison are worthless. Dr. M'Lane's genuine Vermifuge also his celebrated Liver Pills, can now be had at all respectable drug stores. **None genuine without the signature of** FLEMING BROS.

Table of Contents.

Annual Address before the N. C. S. Ag. So..... 266
Cooke's New Map, ... 279
Cucumbers,..... 271
Exchanges,..... 278
List of Premiums,..... 257
Morgan Horses,..... 278
Medical Notices,..... 281
Notice,..... 273
N. C. State Fair,..... 273
Proceedings of the N. C. State Ag. So.,..... 274
Railroads and Agricultural Exhibitions..... 280
Receipe for mending China,..... 265
Sweet Potatoes—How to put them away,..... 279
The Draining of Inland Swamps,..... 271
The Humors of Fabcombridge..... 279

MORGAN HORSES.

A PREMIUM ESSAY on the origin, history and characteristics of this remarkable *American Breed of Horses.* Tracing the pedigree from the original Justin Morgan, through the most noted of his progeny, down to the present time. With numerous portraits. To which are added *Hints for Breeding, Breaking, and General Use and Management of Horses,*

with practical directions for training them for exhibition at Agricultural Fairs. By D. C. Linsley, Middlebury, Vt. Price, $1, sent free of postage.

C. M. SAXTON & CO.,
Agricultural Book Publishers,
140 Fulton St., N. Y.

November, 1856. 9—1t.

DOCTOR HOOFLAND'S
CELEBRATED
GERMAN BITTERS.
PREPARED BY
DR. C. M. JACKSON. PHILAD'A, PA.

WILL EFFECTUALLY CURE
LIVER COMP'T, DYSPEPSIA, JAUNDICE,
Chronic or Nervous Debility, Disease of the Kidneys, and all diseases arising from a Disordered Liver or Stomach.

Such as Constipation, Inward Piles, Fulness or Blood to the Head, Acidity of the stomach, Nausea, Heartburn, Disgust for food, Fullness or Weight in the Stomach, Sour Eructations, Sinking or Fluttering at the pit of the stomach, Swimming of the Head, Hurried and difficult Breathing, Fluttering at the Heart, Choaking or suffocating sensations when in a lying posture. Dimness of vision, Dots or webs before the sight, Fever and Dull Pain in the Head, Deficiency of Perspiration, Yellowness of the skin and eyes, Pain in the Side, Back, Chest, Limbs, &c, Sudden flushes of Heat, Burning in the Flesh, Constant imaginings of evil, and great depression of Spirits,

The proprietor in calling the attention of the public to this preparation, does so with a feeling of the utmost confidence in its virtues and adaptation to the diseases for which it is recommended.

It is no new untried article but one that has stood the test of a ten years' trial before the American people, and its reputation and sale is unrivaled by any similar preparations extant. The testimony in its favor given by the most prominent and well known Physicians and individuals in all parts of the country is imioense, and a careful perusal of the Almanac published annually by the proprietor, and to be had gratis of any of his agents, cannot but satisfy the most skeptical that this remedy is really deserving the great celebrity it has obtained.

Principal Office and Manufactory No. 96 Arch St. Philadelphia, Pa.

TESTIMONY FROM N. CAROLINA.

ASTONISHING EFFECTS FROM THE GERMAN BITTERS.

Certificate of Dr. W. SMITH, of Pine Hill, Richmond Co., N. C., March 4, 1854

Dr. C. M. Jackson, Philadelphia.—Dear Sir,—I have been a subject of Dyspepsia in its worst form, for the last five years. Such was my condition for 12 months that the physicians and all who saw me said I must die. While in this condition, I was carried to the watering places in Virginia, Tennessee and North Carolina, but was not benefitted by any water to which I was taken. While on my way home, I stopped a week at Rutherfordton, a small village in N. Carolina to try the effect of some Chalybeate water in that place. About the last of the week, I went into a drug store to get some medicine for my child and myself. There were several of the village physicians in the store, and one of them seemed to take some interest in my case, and after asking me some questions, said he had been a dyspeptic, and had been greatly benefitted by the use of "Dr. Hoofland's German Bitters," prepared by you, and he insisted that I should try the Bitters. He also called the next day at my room, and insisted so much that I would try them, that I asked him to get me one bottle. He did it, and I commenced taking it as directed, and I do say I was more benefitted by it than all the water and medicine I had ever taken.

After reaching home, one of my neighbors came to me for a prescription and medicine, (he a dyspeptic,) and I gave him nearly all the Bitters I had left; which effected much good in his case. He has often called on me for more of the same kind of medicine, saying he was more benefitted by it than any other he had taken, but I have not been able to get any more for him or myself since; will you, therefore, please ship me a dozen or more as soon as possible.

Respectfully yours,
W. SMITH, M. D.

GREAT CURE OF PILES.

Certificate of W. J. ATWOOD, Huntsville, Yadkin Co., N. C., Nov. 1, 1853.

Dr. C. M. Jackson—Dear Sir,—Allow me to express to you my sincere thanks for your discovery of a medicine, which, to say the least of it, has effected a cure that all other medicines that I have taken have entirely failed to do. "Hoofland's German Bitters," have cured me of the most stubborn and aggravated case of the PILES that, perhaps, ever fell to the lot of man. My case is not a stranger to this community, as I am well known in this and the surrounding counties, and can truly say that my recovery has astonished all my frinds and relations, as I had tried everything recommended, and nothing did me any good until I was prevailed upon to try the bitters. You are at liberty to make any use of this communication, for the benefit of the afflicted, as you may think proper.

Truly yours,
WM. T. ATWOOD.

These Bitters are entirely vegetable, possessing great advantage over every mineral preparation, as they never prostrate, but always strengthen the system.

Price 75c. per bottle. Sold by Druggists and Storekeepers in every town and village in the United States and Canadas, and by

WILLIAMS & HAYWOOD,
Raleigh.

November 1856.

WARRENTON FEMALE COLLEGIATE INSTITUTE
WARRENTON, N. C.

THE 30th session of this school will commence on the 3d of January next, prepared to give thorough instructruction in all the branches of female education. Pupils received at any time. All charges from time of entrance.

Terms per Session:

Board, washing, lights and fuel in rooms,	$60 0
English tuition,	12 5
Music on Piano, Guitar, Melodeon, with use of instrument, each	23 0
Oil Painting,	15 0

Persons wishing further information, will please apply to GRAVES, WILCOX & CO.

December, 1855.

FALL TRADE, 1856.

JOHN N. GORDON, GROCER AND COMMISSION MERCHANT, AND DEALER IN METALS, 14th Street, near the Exchange Hotel, offers for sale—

Orleans and Coffee Sugars, various grades.
Loaf, Crushed, Granulated and Powdered Sugars.
Laguira, Rio and Old Government Java Coffee.
Orleans and West India Molasses.
Pure Cider Vinegar.
Sperm, Adamantine and Tallow Candles.
Soaps, Fancy and Brown.
Sole Leather, good and damaged.
All sizes Flat, Round, Square Swedes, American Hammered, English Refined, English and American rolled, English and American blistered Steel. } IRON.
German, Cast and Shear Steel.
Broad Plough Iron, 6 to 12 inch.
American, English and Russia Sheet Iron.
Oval, half Oval and half round Iron.
Nail Rods, American and Swedes.
Band, Scroll and Hoop Iron.
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Horse and Mule Shoe Iron.
Tin Plate, Pig and Bar Tin.
Sheet Zinc, Spelter, and Spelter Solder.
Sheathing, Brazier's and Bolt Copper.
MeCormick's and Palmer Mould Boards.

☞ Particular attention given to the sale of Wheat, Flour and Country Produce generally.
Richmond, Sept. 17, 1856.

THE

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THE Twelfth Annual Volume of this useful publication commences on the 13th day of September next.

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June 16, 1856. 5—tf.

J. H Gooch, Oxford, N. C., solicits orders for the above plows.

WE HAVE IN PRESS, and shall publish August 16, the Confidential Correspondence of the Emperor Napoleon, and the Empress Josephine including letters from the time of their marriage, until the death of Josephine; and also, several private letters from the Emperor to his brother Joseph, and other important personages. With numerous illustrative notes and anecdotes. By JOHN S. C. ABBOTT, author of "Life of Napoleon," &c., &c. One vol., 12mo. Price, $1.25.

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THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

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P. P. WILLIAMS & CO.

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A new and singular y suecesful remedy for tbe cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Hu nors, Nervousness, Irritability, Inflammations, Headaebe, Pains in the Breast, Side, Baek, and Lim.bs, Female Complaints, &e., &e. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and mucb sickness and snfferiug might be prevented, if a harmless but effeetual Ca thartic were more freely used. No persou can feel well while a eostive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to beeome or produce tbe deep seated and formidable distempers which load the hearses all over tbe land. Henee a reliable family physie is of the first importance to the public health, and this Pill has been perfeeted with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characteras to forbid the suspicion of untruth.

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Hon. Edward Everett, Senator of the U S.

Robert C. Winthrop, Ex-Speaker of the House of Representatives.

Abbott Lawrence, Minister Plen. to England.

†John B. Fitzpatrick, Cath. Bishop of Boston.

Also, Dr. J. R. Chilton, Praetieal Chemist, of New York City, endorsed by

Hon. W. L. Marcy, Seeretary of State

Wm. B. Astor, the riehest man in America.

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Did spaee permit, we could give many hundred eertificates, from all parts where the Pills have been sned, but evidenee even more convincing than the experienee of eminent public men is found in their effeets upon trial.

These Pills, the result of long investigation and study, are offered to the public as the best and most complete which tbe present state of medical seienee can afford. They are compounded not of the drugs themselves, but of the medieinal Virtues only of Vegetable remedies, extraeted by ehemieal process in a state of purity, and eombined together in sneh a manner as to insure the best results. This system of eomposition for medieines has been found in the Cherry Pectoral and Pills both, to produce a more effieient remedy than had hitherto been obtained by any process. The reason is perfeetly obvious. While by the old mode of composition, every medicine is burdened with more or less of aerimonious and injurious qualities, hy this each individual virtue only that is desired for the enrative effeet is present. All the inert and obnoxious qualities of each substance employed are left behind, tbe curative virtues only being retained. Henee it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medieine known to the world.

As it is frequently expedient that my medicine should be taken under the counsel of an attending Physician, and as he could not properly judge of a remedy without knowing its composition, I have supplied the aeeurate Formulæ by which both my Pectoral and Pills are made to the whole body of Practitioners in the United States and British American Provinces. If, however, there should be any one who has not received them, they will be promptly forwarded by mail to his address.

Of all the Patent Medicines that are offered, bow few would he taken if their composition was known. Their life consists in their mystery. I have no mysteries.

The composition of my preparations is laid open to all men, and all who are competent to judge on the subject freely acknowledge their convietious of their intrinsic merits. The Cherry Pectoral was pronounced by scientific men to be a wonderful medicine before its effects were known. Many eminent Physicians have declared the same thing of my Pills, and even more confidently, and are willing to certify that their anticipations were more than realized by their effeets upon trial.

They operate hy their powerful influence on the internal viscera to purify the blood and stimulate it into healtby action—remove the obstructions of the stomaeh, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wbereever they exist, sueh derangements as are the first origin of disease.

Being sugar wrapped they are pleasant to take, and being purely vegetable, no harm can arise from their use in any quantity.

For minute direetions, see wrapper on the Box.

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THE NEW-JERSEY FERTILIZER COMPANY is now prepared to receive orders for this important Manure. For all lands upon which ashes are beneficial, the Marl is more than a substitute. Professor Cook, in his Annual Report to the Legislature of New Jersey, says:

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November, 1856 9—

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Nov. 1856.

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February, 1856. tf

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Newbern, January 1, 1856.

Strict attention given to the sale of all kinds of country produce.

FARMING IMPLEMENTS.

Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete assortment of the most approved Farming and Horticultural Implements, of good quality and at low prices.

For sale by R. L. ALLEN,
Jan. 1856 189 and 191 Water Street, N. Y.

DR. STRONG'S COMPOUND SANATIVE PILLS

These Pills are entirely Vegetable, and are a most superior Medicine in the cure of all *Bilious Complaints, Chills and Fever, Dyspepsia, Costiveness, Liver Complaint, Jaundice, Sick Headache, Scrofula, Salt Rheum, Fevers of all kinds, Loss of Appetite, Obstructed and painful Menstruation, and all lingering diseases.*

As a Female Medicine they act like a charm, and when taken according to the directions, they never fail to cure the worst cases of **Piles,** after all other remedies fail.

They purify the blood, equalize the circulation, restore the Liver, Kidneys, and other Secretory Organs, to a healthy tone and action; and as an Anti-Bilious Family Medicine they have no equal. Price 25 cents per box.

Also

DR. STRONG'S PECTORAL STOMACH PILLS

A remedy for Coughs, Colds, Catarrh, Bronchitis, Croup, Whooping Cough, Asthma, Consumption, Nervous Diseases, Dyspepsia, Costiveness, Erysipelas, Disease of the Heart, Inflammation and Pain in the Chest, Back and Side, and all diseases arising from a deranged state of the Stomach, and to relieve the distress and bad feeling from eating too hearty food, in weak and dyspeptic habits.

WARRANTED TO BE PURELY VEGETABLE.

These Pills act as an Expectorant, Tonic, and Aperient. One 25 cent box possesses three times more power to enre diseases than a one dollar hottle of any of the Syrups, Balsams, or Sarsaparillas, that were ever made; and a simple trial of only one box will prove this important truth.

They promote Expectoration, Loosen the Phlegm, and Clear the Lungs and other Secretory Organs, of all morbid matter, and there is not another remedy in the whole Materia Medica capahle of imparting such healing properties to the Lungs and Vital Organs as these Pills. **They Cure Costiveness, produce a good, regniar Appetite, and Strengthen the System.**

Price 25 cents per box, containing 25 doses of Medicine.

Call on the Agents who sell the Pills, and get the *Planter's Almanac* GRATIS, giving full particulars and certificates of eures.

Both kinds of the above-named Pills are for sale in **Every Town and Village in North and Sonth Carolina.**

And at Williams & Haywood, Raleigh, N. C.
May 1855. 3—

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The Company is entirely free from debt: has made no assessments, and has a very large amount in cash and good bonds, and is therefore confidently recommended to the public.

At the last Annual Meeting the following Officers were elected for the ensuing year:—

JAMES SLOAN, *President.*
S. G. COFFIN, *Vice President.*
C. P. MENDENHALL, *Attorney.*
PETER ADAMS, *Sect. & Treasurer.*
W. H. CUMMING, *General Agent.*
PETER ADAMS, *Secretary.*
GEORGE T. COOKE, *Agent at Raleigh.*

January 1, 1856. 29—tf.

NORTH CAROLINA MUTUAL LIFE INSURance Company, Raleigh, N. C. This Company insures the lives of individuals for one year, a term of years, or for life, on the MUTUAL PRINCIPLE, the assnredfor life participating in all the profits of the Company. For policies granted for the whole term of life, when the premium therefor amounts to $50, a note may be given for one half the amount of the premium bearing interest at 6 per cent. without guaranty.

The prompt manner in which all losses have been paid by this Company, together with low rates of premium, present great inducements to such as are disposed to insure.

SLAVES are insured for a term of from one to five years, for two-thirds their value.

All losses are paid withiu 90 days after satisfactory proof is presented.

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WM. D. HAYWOOD,	WM. D. COOKE,
JOSH G. WILLIAMS,	R. H. BATTLE,
H. W. HUSTED,	WM. H. JONES,
WM. H. MCKEE,	P. F. PESCUD'
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RICH'D. B. HAYWOOD, M. D. } *Consultation.*

R. H. BATTLE, } *Executive Com-*
W. W. HOLDEN. } *mittee.*
CHARLES B. ROOT, }

Communications should he addressed, (post paid) to
JOHN G. WILLIAMS, *Secretary.*

NORTH CAROLINA

MUTUAL INSURANCE COMPANY

AT THE ANNUAL MEETING OF THE North Carolina Mutual Insurance Company, held on the 9th inst. the following persons were elected Directors and Officers for the ensuing year:

OFFICERS OF THE COMPANY.

President.
H. D. Turner, *Vice President.*
John C. Partridge, *Secretary.*
John H. Bryan, *Attorney.*

John R Williams, } *Executive Committee.*
T. H. Selby, }
C. W. D. Hutchins, }

This Company has been in successful operation fo more than 7 years, and continues to take risks upo all classes of property in the State, (except Steam Mills and Turpentine Distilleries,) upon favorahl terms. Its Policies now cover property amounting to $4,500,000, a large portion of which is in Countr risks; and its present capital is nearly Seven Hundred Thousand Dollars, in bonds properly secured.

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All communications in reference to insuran should be addressed to the Secretary, post paid.
J. C. PARTRIDGE, *Sec'y.*

Raleigh, June 9th, 1856.

JOHN N. GORDON,

Grocer and Commission Merchant and Deal in Metals,

14th Street, near the Exchange Hotel,
RICHMOND, VA.

May, 1856. 3.—tf

PIANOS, MELODEONS, AND MUSIC.

THE CASH SYSTEM ADOPTED! PRICES GREATLY REDUCED.

HORACE WATERS,

No. 333 Broadway, New York.

AGENT FOR THE BEST BOSTON AND NEW YORK INSTRUMENTS

THE LARGEST ASSORTMENT OF PIANOS, Melodeons, Musical Instruments, and Musical Merchandise of all kinds, in the United States. Pianos from ten different Manufactories, comprising those of every variety of style, from the plain, neat and substantial 6½ octaves, in Walnut or Rosewood Cases, from $150 to $200, to those of the most elegant finish up to One Thousand Dollars. No house in the Union can compete with the above in the number, variety, and celebrity of its instruments, nor in the Extremely Low Prices at which they are sold.

Horace Waters' Modern Improved Pianos,

With or without Iron Frames, possessing in their improvements of over-strings and action, a length of scale, power, and compas of tone equal to the Grand Piano, united with the beauty and durability of structure of the square Piano. They are justly pronounced by the Press and by the first Musical Masters to be equal to those of any other manufacturer. They are built of the best and most thoroughly seasoned material, and guaranteed to stand the action of every climate.

Each Instrument guaranteed to give satisfaction, or purchase-money refunded. Second-hand Pianos at Great Bargains, constantly in store, price from $30 to $140.

HORACE WATERS' MELODEONS, superior Instruments in tone, touch and durability of make. (Tuned the equal temperament.) Melodeons of all other styles and makes. Price, $45, $60, $75, $100, $125, $140; double Reeds, $150; double Reeds and two banks of Keys, $200. Less a liberal discount. Clergymen and Churches, an extra disconut.

MARTIN'S GUITARS, *Brown's Harps, Flutes, Flutinas, Accordeons, Violins*, and Musical Instruments of all kinds, at lower prices than ever before offered to the public. A large discount to Teachers and Schools. The trade supplied on the most liberal terms.

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Music sent by mail to all parts of the country, post paid. Particular and personal attention paid to all orders received by mail. Satisfaction guaranteed in every instance. Pianos and Melodeons for rent, and rent allowed on purchase. Pianos and Melodeons for sale on monthly payments. Second-hand Pianos taken in exchange for new. General and select Catalogues and Schedule of prices forwarded to all partsof the country by mail.

☞ *Great Inducements offered to Agents in all parts of the Country, to sell the Horace Waters' Pianos, Melodeons, and Catalogue of Music.*

TESTIMONIALS FROM PROFESSORS, AND OPINIONS OF THE PRESS.

Horace Waters, Esq., 333 Broadway, New York:

Dear Sir,—Having examined your Piano-Fortes from scientific and appropriate tests, I am enabled to form a satisfactory judgement of their merits, and it is with pleasure that I can speak of them as among the most celebrated and improved makes of the day.

For Power, brilliancy and richness of tone, elasticity of touch, and beauty of finish, they will not suffer in comparison with those of any other manufacturer, and those desirous of obtaining a really good Piano-Forte—one that will prove an equivalent for their means, will find such a one in your beautiful instruments.

THOMAS BAKER,
F.A.M. Leader of Jullien's Band, and Musical Director and Conductor at Niblo's Garden.

Pianos and Music.—We learn that Horace Waters, of 333 Broadway, N. Y., agent for the sale of many of the most celebrated makers of Pianos and Melodeous, is offering them at prices which we advise all who desire to purchase to avail themselves of. He is also selling his large and well known Catalogue of Music at one-third off from the regular prices, and will forward the same free of postage. His offers to the trade, teachers, and schools, are of the most favorable character—all of which he will be able to fill to the letter, for having wisely adopted the cash system. The Horace Waters' Pianos are known as among the very best. We are enabled to speak of those instruments with some degree of confidence, from personal knowlege of their excellent tone and durable quality.—*N. Y. Evangelist.*

The treble is clear, pure, powerful, and very melodious, the base is deep, rolling, and sonorous; the middle part is rich, and sympathetic, and possesses the power of singing, *i. e.* of uniting the sound of each tone, in a degree but rarely achieved.

Henry C. Watson.

September, 1856.

7—tf.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. Cooke, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

Executive Office,
Raleigh, Jan. 26, 1856.

Mr. William D. Cooke has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

Dear Sir:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
January 26th, 1856. WILL: A. GRAHAM.
Wm. D. Cooke, Esq.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

N. B.—The copartnership heretofore existing between W. D. Cooke and Samuel Pearce in the proprietorship of the Map has been dissolved by mutual consent.

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A NEW AND PRACTICAL FORM BOOK, containing forms of all those Legal Instruments important to be known by the People of North Carolina and designed for the use of *Justices of the Peace, Sheriffs, Clerks, Constables, Coroners*, compiled and arranged by C. H. Wiley, Esq., to which are added the Constitutions of North Carolina and of the United States. Published by Wm. D. Cooke, Raleigh, N. C.

Any person enclosing One Dollar in a letter, or that amount in Postage Stamps, will receive by return mail a copy of the work *free of postage*. *Be very careful to send for* "Wiley's New Form Book" and address
WM. D. COOKE, Raleigh, N. C.

April, 1856.

NORTH CAROLINA INSTITUTION.
FOR THE
DEAF AND DUMB AND THE BLIND.
RALEIGH, N. C.

The next session of this Institution will commence the first day of September. Pupils should be sent promptly at the commencement of the session. Application for admission should be made to
WILLIAM D. COOKE,
Principal.

August, 1856.

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August 18, 1855, tf.

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J. J. McDowell

THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WILLIAM D. COOKE, Editor, and Publisher.

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Annual Address,

Delivered before the North Carolina Agricultural Society, at the Fair Grounds, near Raleigh, on Friday, 17th October, 1856, by Prof. E. MITCHELL, *of the University.*

[CONCLUDED.]

For if vegetables, the crops which we cultivate and raise are composed of the elements of water, which they can easily procure, which we can supply if they are so in want that there is an absolute necessity for it; and if carbon, which they get from the air; all they can possibly want is a soil of almost any sort in which to obtain a foothold and raise themselves up so as to place themselves under the genial influence of the atmosphere and the sun's rays. Why then should there be a difference in soils? Why should not one be as good as another? For a long time we were unable to assign any satisfactory reason.—One class of men—one profession was as much in the dark about the matter as another. There was a mass of facts to which was given by courtesy rather than because they had any valid title to it, the name of agricultural chemistry. It was not, in fact, entitled to the name, and for a number of years I was accustomed to deny that there was any such science as agricultural chemistry. In the year 1812, or 44 years ago, Sir Humphrey Davy, at the instance of the English Board of Agriculture, delivered in London a course of lectures, which were afterwards published, on this subject. They were written with the elegance and precision which characterize all the productions of his pen, but so far as the information they contain and the new facts they furnish are concerned, they are of no considerable value. The proof of this is to be found in the fact that the interest they awakened was only temporary; it soon died out, and the whole subject lay neglected for a number of years. An intelligent friend of mine, in the soundness of whose judgment, as well as in his general fairness, I have great confidence and who had, at least, paid great attention to the subject of agriculture, told me that after reading Sir Humphrey's book carefully through, he seemed to have gleaned out of the mass of chaff of which it is in the main composed, one idea both valuable and new, and no more. Some exaggeration

it may be believed. there was in this statement, but the worth of the contributions of Sir Humphrey to agricultural chemistry, it will, I believe, be conceded on all hands, was very inconsiderable.

At length, men in groping about in the darkness began to feel the truth and to lay hold of it, and though from the want of the needful books of reference, I cannot speak with perfect confidence, I am of the opinion that not only to the Germans in general, but to Springel in particular, the larger part of the credit connected with the more recent discoveries in this field of science, and with the new views that are taken, is due. Another prodigious stride, and one of great importance, has unquestionably been made, and its importance depends upon the fact that it is in the right direction. We are placed by it in a condition not only to correct our own theories, but also to *improve our practice.* There is a science of agricultural chemistry now, and its teachings are of immense value. I have, first of all, to state briefly but distinctly what they are.

When vegetables are burnt they leave a quantity of ashes behind them. The pine tree is almost an exception, for when we burn it the quantity of ashes procured is inconsiderable.—With this fact its capacity of growing slowly indeed, but with a degree of vigor even upon the sand hills that are barren for almost everything else, has probably a close connexion. Vegetable matter generally, leaves a considerable quantity of ashes. Is this what Tull supposed?—merely some fine particles of common earth, or have ashes a peculiar constitution of their own, and one that is different for each peculiar kind of vegetable growth, and does the matter contained in these ashes play an important part in the economy of every plant? These were the questions to be settled, and the answers that have been returned have a deep and important significancy for the agriculturist. With the truths they state, his mind should be very thoroughly imbued; they should be perfectly familiar to him. There *are* a few chemical compounds that, as they are always found in its ashes, appear to be essential to the healthy and vigorous growth of each plant, so that if they are present in suitable quantity in a soil, and there is no other hindrance, that will be a fertile soil for the vegetable in question. These indispensable requisites of fertility are few in number; they are required by nearly all, if not by all absolutely of the *plants* we cultivate, though not by all in the same proportion and in an equal degree. They are potashes, or that substance in common which communicates to it the property of forming a soap when boiled for some time with an oil or with tallow; soda, which is nearly related in its properties to potashes; lime, magnesia, silica or the earth of common white flint, phosphoric acid, and sulphuric acid.

Now it is remarkable with regard to two of these substances so indispensable to vegetation, (potashes and phosphoric acid) that they are everywhere and nowhere. A proof it is of the existence of a wise and kind intelligence that presided over the creation of the earth and all that inhabit it, and that he has ordered all things well. They are diffused in *small* quantity and proportion through all soils, whilst there are few if any extensive and rich mines of them from which they may be extracted and strewed over the surface of our fields, so as to create in them all a fertility which is not native and natural.—Wherever there is one of those blades of grass on which our domestic animals feed, or a stalk of wheat which brings a single grain of seed to maturity, there are potashes and phosphate of lime in the soil. The quantity especially of the last named substance may be very inconsiderable, so small that the analytical chemist who has a parcel of that soil under examination, will with difficulty, if at all, be able to separate and weigh it. The entry in his note book may be —phosphoric acid—a trace, whilst from a stalk of wheat we obtain a statement considerably different. There is certainly no superfluity of phosphoric acid, the wheat stalk would say, in that soil, yet I found enough to meet my immediate necessities, as if you burn me, stem, blade and grain, and proceed to analyze my ashes, you will readily discover.

The fact that these few substances are always found in the ashes of vegetables, seems to furnish decisive proof that they play an important part in the economy of the plant, and are essential to it, as they also are, the greater part of them, to animals of different races and kinds. Of the particular uses of each, and what changes are accomplished through its agency, we are wholly ignorant. It is one of the secrets of the Deity, from over which he may never permit a human hand to lift the veil; but in the mean time, we shall do wisely in applying for our

own advantage the knowledge we have already acquired. I recapitulate, therefore, the facts to which your attention is more particularly invited, once more.

Potassa or pot shes, as they commonly call it in the market, and phosphate of lime, are found to be contained in the ashes of all or nearly all the vegetables we are in the practice of cultivating in this country, from which we infer that if not absolutely indispensable, they are very important and useful to the plant, and when they are present in considerable quantity in the soil, promote very greatly its fertility. This is not mere speculation and theory, but it has been fully established by experiment. Fields that were utterly barren, and in the soil of which no phosphate of lime could be detected, on receiving a generous application of that substance, have yielded abundant crops. These two precious substances exist in small quantity in the soil of North Carolina, and in every part of it, in the east and the west, in every county, on every plantation, on the surface, and at all depths.—But here I shall perhaps be met with an objection. Of what use is your chemistry after all? You tell us that you have found out that these substances are absolutely necessary, indispensible to plants—that they are everywhere and nowhere—every where in small quantities—whilst there are few if any extensive and rich mines of them. Of what advantage, then, can it be to us to be advised of the important part they play in the vegetable world. Your information is just about as valuable as would be that of the physician, who, coming to the bedside of a patient should tell him, that he knew what was the matter with him, understood his disease perfectly well, and could relieve him with ease, if he could only furnish himself with the appropriate remedies—but unfortunately these were at present, nowhere to be obtained. Just as you tell us that our soils are, or may become diseased—that you know what medicine must be applied to restore them to sound and perfect health, but are silent about the places where, or the methods by which, they are to be procured.

It is not to be denied that there is some show of reason in these objections. But they may be met so far as the claims of chemistry, and the question respecting the benefits conferred by her upon agriculture are concerned, by certain counter statements. If we cannot accomplish all that might be desired, we can do something. We can suggest the erection of a bone mill in each county so as to make the best and most economical use that is possible of the small amount of phosphate of lime we have already at our command—we can recommend the most careful search amongst the shell limestones of the low country for masses containing an available percentage of this precious substance. And finally, we can warn our fellow-citizens of the danger of permitting whatever stock we now have of these constituents of a rich soil, to run to neglect and waste. I think I can satisfy any one who will follow a fair and honest argument to its legitimate conclusions, and will adopt such conclusions as part and parcel of his belief, that these invaluable substances are contained in larger proportion in what we commonly call the soil as distinguished from the subsoil, than at any other point that is within some five feet of the surface; and the use I intend to make of this fact is to press upon the farmers of the State a more diligent use than has hitherto been made in North Carolina husbandry of all the means at their disposal, and especially hill side ditching and horizontal plowing, as the only means they have of perpetuating the fertility of the fields they cultivate. I know very well that these are agricultural operations which are faithfully attended to by some few individuals. My object will be to show that there is reason in the methods they employ; that it is no humbug which we recommend, and induce as many persons as I can who cultivate rolling or broken land, to adopt the practice.

North Carolina, at the time the white man first made his appearance on the western shore of the Atlantic and the Aboriginal Indian was its only inhabitant, was covered all over, as it had been for ages, with a continuous forest.—Not exactly such a forest as is now seen through those parts of the county of Wake, for example, which have not yet been cut down: the large trees were more thinly scattered, presenting somewhat the appearance of an orchard.—This feature of the original landscape has not yet been altogether obliterated in some of the extreme western counties. The large trees threw out their roots in every direction in search of the food, the moisture, and earthly salts especially, which were indispensable to their healthy and vigorous growth. The tap root goes directly downwards, giving off its branches, and the small rootlets penetrate

sometimes to a depth of ten, twelve and fifteen feet. They are in search of potash, soda, lime, phosphoric acid, sulphuric acid and a few other things, which they collect and carry up so as to be deposited in the trunk, limbs and leaves.—When these woody matters perish, whether in the natural course of decay or by being burnt upon the ground, the precious elements of fertility that have been extracted from the subsoil, and from that which lies at a considerable depth, have been brought up and incorporated with the vegetable tissue, are liberated and mingled with the top soil. They are likely to be dissolved again to a certain extent by the rains that fall, some part of them is carried off to the ocean and irretrievably lost, some is soaked up and sinks to a certain distance into the ground, but a large part remains at or near the surface, helping to constitute what we call the soil. The principle for which I am contending is simply one that is well understood by many persons, but not brought out with the distinctness in which, from its importance, it merits to be placed. That the *soil* from the course, and in consequence of the events and changes by which it has been formed, is necessarily richer in the elements of fertility than the subsoil, and that the existing upper soil, is therefore to be retained in its position by all the decent and honest methods we can employ. Amongst these, *hill-side* ditching and horizontal ploughing appear to me to hold the first place. The deep subsoil has been in a course of impoverishment and the surface soil in a course of enrichment for ages, and what the final results of such a process are likely to be, I suppose it requires not the wisdom of a Solomon to determine and decide. What we need at this time, as it appears to me, more than anything else, in agricultural chemistry is, a long series of analyses, extending not laterally but vertically, not an account of the composition of a parcel of soil taken in Edgecombe, and of another from Rowan; but the same thing for parcels from different depths.—Suppose a deep well to be dug here in Raleigh, and the earth examined, which is taken, *at the surface*, and at the depths of 4, 8, 12, 16, 20, and 24 feet, till we came to a point where the decomposed rock differs but little in constitution from such as is still solid. The information afforded by such analyses would be valuable, inasmuch as, amongst other things, it would settle definitely the question in relation to the safety of such kind of deep ploughing, as shall bring the *deep* subsoil to the surface, whilst that which had been at the surface is buried where the roots of plants will hardly reach it.

Most of the farmers whom I have the honor to address know very well what is meant by a gully or a galled place in a field. This last name is well applied. They are spots as unsightly, and uncomfortable, as those upon a working animal, from which the hair has been rubbed off, and the skin chafed and fretted, until it has become tender at least, if not sore. A person unacquainted with farming, who visited a large field or farm, that was in this condition, would be inclined perhaps to think very highly of it. The sides and bottoms of the gullies and washes, would be seen to have a rich, ruddy color—the earth itself to be tolerably mellow and pliable. I will turn in there, he would say, with a good sharp, heavy plow, break it up well, and show these stupid farmers how to raise corn. And those same farmers whom he characterizes as so stupid may be expected to watch with some degree of malicious pleasure the result of his operations. Such gullied and galled places, if not absolutely immedicable and incurable, are exceedingly difficult to be nursed into fertility. Differences unquestionably there will be in different places and counties, depending upon the kind of rock that underlies them. I am speaking of what is most common and general. And we can see the reason why these things are. The surface that is in these cases exposed, has been previously plundered and stripped of its potassa, soda, lime and phosphoric acid, by the trees which once grew just above it, when there was a soil above it: and now that the elements of fertility have been taken away, we need hardly wonder that it is barren. The sandstone that lies east and south of the University has extensive and valuable low grounds along the streams which flow through it. When these are cleared and brought under cultivation, it sometimes happens that a particular part, which produced well at first, is so situated that high freshets, as they occur, sweep off the whole of the upper surface or soil. The subsoil which is thus uncovered and brought up to the light of day, has about as inviting an appearance as the rest of the field; in color,

texture, and other sensible properties, it seems to be in no degree inferior. Yet while those other parts are beautiful with luxuriant crops, upon the washed portion, even the weeds and wild grasses will hardly take the trouble of establishing themselves. No amount of culture—meaning by this a simple stirring of the ground—will render them productive. They must have added to them those elements of fertility of which they have long ago been deprived.

It will be understood that it is my purpose to compare the chemical constitution of the surface soil only with that of the subsoil through a few feet below, or as far as the forest trees reach, not with that of the earth which has resulted from the decomposition of the rocks at the depth of 25 or 30 feet. This last may be superior in its adaptation to the nourishment of vegetables to the surface soil; so that if a layer of earth two feet in thickness, could be brought at once to the surface, from that depth, throughout the whole of Wake Co., it would be rendered so far as its capabilities for agriculture are concerned, a richer county than it now is. Some experiments on the earth brought up from the bottoms of deep wells, upon the discussion of which I have not time to enter now, have seemed to point in that direction, and to warrant the belief that in some future, *very remote*, age, men may be driven to the task of tunneling the hills, to derive from them the means of providing for themselves—the necessaries of life—that they will then mine to obtain a virgin soil, as they now do for silver and gold.

Some facts stated by Dr. Lyell, in his principles of geology, respecting certain lavas on the island of Ischia, which lies in front of the bay of Naples, lend a degree of probability to what has just now been suggested. These lavas appear to have been poured out of the bowels of the earth, somewhat more than 2,000 years ago; they have undergone a rather rapid decomposition, and produced a soil of the most exuberant fertility. Lyell visited the island and examined it in person in the year 1828.—"Such," he says, "is the strength of the virgin soil, that the shrubs have become almost arborescent; and the growth of some of the smaller wild plants has been so vigorous that botanists have scarcely been able to recognize the species." Like this, other parts of the earth may have been, when they first came from the forming hand of their Creator; and in particular that region, eastward, in Eden, where the Lord God planted a garden, and put there the man whom he had formed.

But these are matters of mere speculation, and our subject is, or should be altogether practical. My main object has been to show that the operation of hill-side ditching (already in use amongst many of our planters and farmers) is as reasonable and sound in theory as it is found to be beneficial in practice; and to recommend its adoption by all whose lands are in any considerable degree rolling or broken. And I have been the rather led to the selection of this topic, because it is an improvement that is within the reach of all persons, as well those of small capital, and who have but little ready money, as the men of ample means; of the farmer whose possessions are remote and difficult of access, so that he cannot readily and easily supply himself with foreign fertilizers; as of the amateur agriculturist here in Raleigh who, by the profuse employment of guano, poudrette and superphosphate of lime, has bloated his field into a sickly show of a fertilty which does not really belong to it. My object has been to benefit a little, if I could, *the masses*—to call their attention to the means of transmitting to the next generation the soil of North Carolina, little if at all injured by the culture to which we have subjected it. It is a contribution which every good citizen may be expected to make to the public weal, especially, as the expense of time and labor, on a plantation of moderate extent, is so comparatively inconsiderable. But little direct, positive good, not much *increase* of the returns his fields yield, is to be expected. Its object is rather the prevention of mischief and evil. If the valuable results of its adoption are not witnessed, the opposite effect of it will be likely to render itself very distinctly visible, and will be felt in the diminished value assigned to his possessions by all who are acquainted with their history.

And having ventured to point out the duties of such as farm in a small way, as well as of others, may I also be indulged in a suggestion in a single particular for their benefit in relation to the prizes that are from year to year to be adjudged here for excellencies of any kind. *That their effect be to call into existence the*

exact kind of improvement, the country from the characters of its climate and soil most needs, as best adapted to its actual condition, and no others. In England they have succeeded by long, patient and skilful attention to the subject, in carrying forward certain breeds of *sheep* to a high degree of perfection. These races are suited to the circumstances of that particular country, to the climate, the kind and quality of the food that is furnished there for this animal, and the condition and wants of the people. One of the animals that is of first rate importance here is the hog, which constitutes so large a portion of our food, from year to year; and we need for the uses we make of him not *any* kind of hog that may happen to turn up—not the hog that is most esteemed and has the highest value placed upon him in England, Germany or the Northern States—but a genuine North Carolina hog, native born and bred, whose desirable characters I will proceed very briefly to specify.

An English or German hog is an idle sluggard, as well as a glutton, from the time when he is littered till he feels the butcher's knife.—He lives in a pen or in a field or lot of small dimension, and does nothing but eat. He is a kind of machinery for converting vegetables and grains of different kinds into pork. Amidst our great extent of land unenclosed and still in forest, the North Carolina hog is and should be a very different kind of animal. He has almost as much mind as some men and women that I have seen, and this is one of his prime accomplishments. In a country that abounds in worms, weeds, acorns, and other mast, he is with good reason expected to be enterprising and industrious—to shift for himself. If I know of one that has ingenuity and audacity in getting through or over a fence into a corn field and helping himself there, I respect him the more on that account, and when he comes to be brought upon the table, I find his bacon the more savory and luscious for that very reason. But this is not all. There are some *men*, who, if you stuff them with seven pounds of fat beef a day, will be like Pharaoh's lean line, even if they are not mere walking skeletons.—It is not *in* them to thrive and grow fat. On the other hand, we meet now and then with an old woman, who if you supply her with corn bread, and give her water that is well peopled with tadpoles and other reptiles, the larvæ and eggs of insects will expand and swell out indefinitely. It is the same with regard to the hog. I mean to say there is the same kind of difference between individuals and races.

A Chatham man, some years ago, as I was returning from Pittsborough to the University, took me around to see a sow and her litter of pigs, belonging to him, and which he proposed to sell me. As they appeared to be healthy and he commended them highly, I made the purchase. Things went well enough till the pigs were grown and were shut up in the latter part of October to be converted into pork. I then found that I might just as well attempt to fatten the same number of pine shingles. Other hogs, unlike these, show a disposition from their pighood to laugh and grow fat. These, if they are also industrious are the kind for North Carolina, and many thousand dollars may unquestionably be saved in the State every year, by the gradual formation through a careful attention to this subject and repeated trials of a breed of this kind. To expect that any hog will fatten on absolute starvation, is unreasonable; but we want such as will make pork with the smallest possible drain upon the corn crib. When, therefore, this kind of stock is offered in competition for any kind of prize, the judges should, in my opinion, pay some regard to the intellectual and moral character, as well as the form and size of the animal. The history of his past life should be called for. What part of the bone and muscle and fat that is here has been gathered out of the woods or stubble field, and how much is the result simply of high feeding? And according to the answers returned to these questions, should be the awards.

Gentlemen of the Committee, in answer to your call, I have come to discharge as well as I could the duty assigned me, and read in your hearing what had been prepared under the pressure of other engagements and with many interruptions. I think it well that there should be an annual address on these occasions; not that very much that is new, and on that account valuable, will be brought forward on an art, at least, if not a science, as old as agriculture. But it serves as a decent introduction to the business that is to succeed it. I expect much more from the intercourse of gentlemen engaged in agriculture, and the interchange that is made of opinions on the best objects on which to bestow their labors, on the best me

thods of tillage, and a comparison of the products of different regions and counties. It is on agriculture, unquestionably, that the wealth and prosperity of North Carolina and the comfort of its population depends, more than upon any other material thing that can be named.—It must, therefore, be regarded by any person of moderate intelligence as a privilege not less than a duty, to contribute as I do this day, his mite to that with which the public and private prosperity is in such manner and so intimately connected.

Stabling for Horses.

The Stable Itself.—Stabling of every description is an evil. It is impossible a stable should be so built that it will allow the animal one half the freedom he enjoys when loose out of doors. Most stables are built so as to aggravate their inseparable cruelty. The flooring slants from the manger to a gutter, which runs at the horses's heels. Now, if horses be in a field, and at rest, they will always be seen standing upon a piece of ground that declines in precisely the opposite direction. The fact is, our modern stables throw the stress upon the back sinews or flexor tendons, and thus prepare many an animal for the injury he afterwards unexpectedly experiences. Nor is this all: the stall is perfectly at variance with the habits of the horse; he is evidently gregarious, or lives among crowds of his fellow-creatures; the stall dooms him to solitude, and the groom sits behind to see he does not put his nose over the divisions, only to look at a comrade. In many stables the stall is so small that the horse cannot turn round; he can lie down perfectly at ease in very few; yet, there he stands, looking at a bare wall, with the stress upon his back sinews, for a period varying from twenty to twenty three hours during the day.—The horse, in any condition beyond the dominion of man, is necessitated to walk, in order to crop the herbage on which he exists; when under human protection, he changes a life of ceaseless activity for one of all but continuous stagnation. Is it to be wondered then that the sinews often fail? Or is it a cause of complaint against nature, that the feet and legs so often oblige man to allow his wretched servant to remain idle? The foot is the most valuable part of the horse: but, to preserve the foot, continued motion is imperative. This is denied; a condition the very contrary is enforced; and then man, in his presumption, blames nature because the foot of the horse is so often the seat of disease.

Loose boxes are better than stalls. But in these the injury is only lessened, not removed. The horse has a loving heart bestowed upon him. He must love something. Lambs, dogs, cats, goats, fowls, &c., every creature he is permitted to see, by turns have become the object of his affections. Mr. Blaine records, that horses have defeated the utmost efforts of man to get them into condition when a companion has been taken away from the next stall, or when the animal has been stabled alone. Bales, after the fashion of military stables, are to be preferred to wood-partitions, unless they be made much lower than at present. The stall should be made a few feet wider than is the custom to build it. The floor should be slant from behind towards the middle, where the gutter may be placed, and then be gently raised and afterwards incline towards the manger. A notion is abroad, that the present flooring carries off the urine of the mare, but were stables paved in the manner we advocate, they would equally carry off the urine of geldings. The point in dispute is surely, then, in our favor.

Most stables, moreover, are kept much too warm. Not that any are heated by means of a stove or fire, but the animals doomed to reside within them are doomed to breathe the same air over and over again, until it becomes hot, and smells so strongly of ammonia, as to sting the eyes and take away the breath of the stranger who unexpectedly enters them. This is not warmth; but foulness, filth, and abomination, which should immediately be abjured. Let a stable be freely ventilated; it cannot have too much air at any period of the year; its inhabitants and the shelter of the walls will always make sufficient difference, especially when the mode of ventilation is considered. The air must never blow directly upon the horses, but the ventilation should be above their heads, for foul air always has a tendency to ascend. If this plan were followed, the stable would range from 40° to 50° in winter, and from 60° to 70° in the summer; but the most violent draughts are better than foulness. If the proprietor therefore, on entering his stable, detects any stench, he had better order the horses out to exercise, and while they are absent have every door and window thrown wide open. After this is done

once or twice, the groom will take care the stable is always sweet, let the master enter when he may.

Every stable should be thoroughly drained, not into a neighboring cesspool, but to such a distance as will preclude any effluvia escaping into the building. Also all dung and litter ought to be carried far away from the place twice a day. This of course imposes extra work on those who are not very fond of employment, but our business here is to point out that which ought to be done, and not to please idlers.

The manger and hay-rack are best low, as the last especially, being in this position, enables the horse to reach his food without raising his head and thereby injuring the vessels by maintaining an unnatural position, and likewise prevents any hay-seed falling into the animals eyes. For the last reason the place ought to be thoroughly ceiled, lest any dust or litter fall down from the loft above, the hay in which, is likewise kept free from contamination arising from ammoniacal fumes, which always have a tendency to ascend.

The loose boxes ought to have their sides smooth, no nail or projection of any kind should be permitted, as the animal is apt to tear itself against such substances. When designed as substitutes for stalls, it is sufficient to have the partition close half way up, and the remainder formed of open rails, whereby the horses are enabled to see one another, and much of the dullness of their lives is removed. Every box ought to be drained by means of a centre grating.

It is a question much disputed whether the litter should be removed or not during the daytime. In the great majority it is entirely taken from the fore, and but a small portion left under the hind feet; and this method seems to be so good as to admit of no improvement as a general rule, though of course individual cases will require varieties in treatment.

While in this place it may be well to speak of summering hunters. Mr. Blaine thus speaks of the effects of turning out: "But a more critical examination of the subject, and the collation of facts, will perhaps set the matter in rather a different point of view. It has long been observed that a horse that has been stabled for many years, and then turned out to grass, seldom thrives; on the contrary, he usually looses flesh and condition, although the pasture in which he is placed may be of the most luxuriant kind. It has been noticed also, by intelligent trainers, that race-horses, after being turned out, never again fully recover that speed they had previously exhibited. It is likewise equally remarked on, that in hunters which have been completely summered abroad, it has been found very difficult, and often impossible to restore them to their full condition until much of the hunting season has passed by."

There are gentlemen, however, who imagine they are acting with great generosity towards the animal which has carried them well through the hunting season, when they determine their dumb servant, after the fatigues of the field, shall enjoy a long rest in a loose box during the summer. Can there be any greater folly than this? Let any man try it upon himself. A rest of six months or more is an impossibility. It is positive stagnation, and the poor horse which is forced to undergo it must feel rejoiced when the hunting season even once more commences.

A better plan is to stable the horse; to endeavor to maintain as far as possible the condition at which he has arrived; to hack him gently, taking him for a slow ride daily, and choosing shady lanes with grass on either side for the exercise; never to remove the shoes under the idea of freeing the feet, but to keep on that which the animal has been accustomed to. Mr. Blaine bears evidence to the advantage of some such plan in the following words; and he is a writer whose veracity has never been questioned.

"It is said that the Earl of Plymouth first tried the plan of summering his hunters altogether within the stable, with little variation in their treatment; by which it is asserted their condition was fully preserved, and that, by this means, his horses entered on their hunting season, in full '*wind, speed, and bottom.*' Others, to avoid this extreme, have soiled their hunters in the stable, or have given carrots; and some have gone a step further, and have pursued the indoor summering, not in stables, but in loose boxes. Still, in all these cases, regular *exercise* is required, or the feet must suffer, or the horses are apt to become pursive, thick-winded, roarers, or broken-winded; but be it remembered that, if such exercise is too severe, then the wear on the limbs continues the deterioration which the hunting season had brought on.'—"*Blaine's Outlines,*" *by Mayhew.*

☞ See our advertising pages.

From the Scientific American.

Growing Chinese Sugar Cane.

Messrs Editors :—As the Chinese Sugar Cane is attracting the attention of the community, and as it is likely to be of great value to the farmers of the United States, and as you have given us an article on this subject in No. 1, Vol. XI, of the *Scientific American*, I thought I would write down and send you the result of my own experience in the growth of this plant.

Some time during the last winter I obtained about three hundred seeds of the "Sorgho Suere" from the Patent Office, which I planted on the 1st of May last, on land that had been cleared three years ago. I laid the field off in checks three feet apart for corn. In some of these hills I planted the seeds of this sugar cane, dropping eight seeds in a hill, making thirty-seven hills in all. I worked the cane precisely as I did the corn, giving it three plowings and three hoeings. In four months from the time the seed was planted the cane was fully matured. It then measured ten feet six inches high, and one inch and three-eights in diameter at the butt end. The joints average twelve in number to the cane, measuring from six to eleven inches long, the shortest at the bottom and the longest at the top. As soon as the seed was ripe, another head of seed put up out of the second joint from the top, and in a short time grew as high as the original head, though not quite so large. By the time the seed on this head began to turn dark a third head sprung up from the third joint, which was about the size of the last head, and now a fourth head is making its appearance from the fourth joint Where this shooting forth of new heads would end, if no frost should come to kill it, I cannot tell. The roots, where I cut off some of the canes some time ago, are sending up new sprouts, some of which are four inches high. I am of the opinion the Sorgho Suere is a perennial plant, and would grow all the time if there were no severe cold to kill it. It appears to surpass anything we we can plant in producing food for cattle. There are commonly twelve leaves on a cane, and these measure, on an average, three feet long, and three inches and a half broad. We commonly plant two stalks of corn on a hill I had eight canes in the same space, each cane producing full as much food as one stalk of corn. At this rate, which is to me matter of fact, one acre of cane will produce as much fodder as four acres of corn. But I am persuaded that I might have planted the cane in drills of three feet apart, dropping eight seeds in every space of eighteen inches, and by this means have eight times as much fodder as corn would produce.

One head of seed that I picked up at random measured three gills, and one gill contained eight hundred seeds. I then selected a large head, and measured it, and found it to contain four and a half gills of seed. The 37 hills that I planted produced three pecks of seeds, this, after drying it two days in the sun, weighed 32 pounds. I had no mill to squeeze the cane, in order to make experiments in syrup and sugar. I made a little roller, which I thought might press out some of the sap, but it was a failure, for want of sufficient power. It flattened the cane, but did not press out the sap, of which the cane appeared to be full. I twisted a joint in my hands after being flattened with the roller, and obtained about half a gill of sap, which was as sweet as any of the sap of the sugar cane of the south. I intend, Providence permitting, to plant at least half an acre next spring, and procure a proper mill and boilers, and make a thorough experiment.

JOS. McKEE.

Juno, Lumpkin Co., Ga., Sep 1856.

Fattening Turkeys.—The alimentary properties of charcoal are very great; indeed, it has been asserted that domestic fowls may be fattened on it without any other food, and that, too, in a shorter time than on the most nutritious grains. In an experiment made to test the value of the article, four turkeys were taken and confined in a pen, and fed on meal, boiled potatoes and oats. Four others of the same brood were also confined at the same time, in another pen, and fed daily on the same articles, but with one pint of very finely pulverized charcoal mixed with their meal and potatoes; they had also a plentiful supply of broken charcoal in their pen. The eight were killed on the same day, and there was a difference of one and a half pounds each in favor of the fowls which had been supplied with the charcoal, they being much the fatter, and the meat greatly superior in point of tenderness and flavor.—This would appear to establish, beyond a doubt, the benefit of charcoal for fattening purposes.

MALE CASHMERE GOAT,

The property of Richard Peters, of Atlanta, Georgia, imported during the year 1849, *from Turkey in Asia, by J. B. Davis, M. D., of South Carolina. Live weight,* 155 *lbs.; weight of yearly fleece,* 7 *lbs. Exhibited at the State Fair of the N. C. State Agricultural Society, October,* 1856.

Cashmere Goats.

These animals were introduced into the United States from the East in the year 1849, by Doctor J. B. Davis, of South Carolina, from whom I purchased, in the year 1853, the entire flock of pure bred females, with the exception of the one owned by Col. Wade Hampton, of South Carolina; one sold by Dr. Davis to Mr. Davenport, of Virginia, and one to Mr. Osborne of New York. The flock now consists of twenty five head, excluding the three pure bred females above enumerated, and several bucks owned by gentleman in Tennessee, Georgia and South Carolina, who are breeding grades, by crossing on the common goat.

A great many opinions having been expressed not only as to the particular variety to which these animals belong, but also as to their value, and adaptation to the different sections of the Union, they are now presented to the U. S. Agricultural Society, in order to elicit an opinion from the distinguished stock-breeders and members present.

That they are not the "Thibet Shawl Goat," is proven by their total dissimilarity to a specimen of that breed in possession of the subscriber; the latter variety having only an undercoating of a few ounces—which portion of its fleece is alone valuable.

Works on Natural Science show that they are not the common Angora Goat of the Province of that name, in Asiatic Turkey, as that animal is of varied color, with a fleece of indifferent value.

They have become known as "Cashmere Goats," from the pure white color and fineness of their fleeces, and their undoubted Eastern origin, having been characterized by America's celebrated Naturalist, the Rev. Jno. Bachman,

FEMALE CASHMERE GOAT,

The property of Richard Peters, of Atlanta, Georgia, imported during the year 1849, *from Turkey in Asia, by J. B. Davis, M. D., of South Carolina. Live weight,* 102 *lbs.; weight of yearly fleece* 4¼ *pounds. Exhibited at the State Fair of the N. C. State Agricultural Society, October,* 1856.

D. D., as "the most valuable variety that can be introduced into our country."

The animals on exhibition consist of

No. 1. A pure bred buck kid, yeaned 20th February last.

No. 2. A pure bred buck kid, yeaned 18th May last.

No. 3. A pure bred buck kid, yeaned 20th May last.

No. 4. A buck kid, yeaned 23d May last, ⅞ Cashmere, ⅛ Common, showing the third cross of the Cashmere on the native goats of the country.

No. 5. A buck kid, yeaned 23d May last, ¾ Cashmere, ¼ Common, showing the second cross.

No. 6. A yearling ewe, half breed Cashmere, showing the first cross. The mother of this specimen being a common blue goat.

The fleeces of the matured bucks weigh from six to seven pounds. Ewes yield from three to four pounds. The flesh of the crosses is superior to most mutton, tender and delicious, making them a desirable acquisition to our food producing animals.

The ease with which they are kept, living as they do on weeds, briers, browse, and other coarse herbage, fits them for many portions of our country where sheep could not be sustained to advantage; whilst their ability and disposition to defend themselves from the attacks of dogs, evidence a value peculiar to this race of animals.

They are free from all diseases to which sheep are liable, hardy and prolific; and experience has proven that they readily adapt themselves to all portions of the United States.

RICHARD PETERS,
Atlanta, Georgia.

Vegetable Physiology.

The Germination of Seeds.—The well matured seed contains in itself the *embryo* of a new plant, together with sufficient food for it to feed upon, till it shall have had time to push its roots into the soil, and its leaves into the air, to draw thence nourishment for itself.

The *embryo* exhibits, through a good microscope, the perfect form of the future plant, whether tree, shrub or vine. It has but to enlarge itself in the directions already commenced in the parent seed, to become a full grown plant. It consists of a *plumule* and a *radicle*. In whatever position the seed be placed in the soil, the radicle shoots downward, to form the future root; and the *plumule* springs upward, enlarging itself into the stem and branches.

Seeds, if kept cool and away from air and moisture, preserve their vitality for thousands of years; and then, if thrown into favorable circumstances, will germinate and send up vigorous plants. Some have disputed this, but facts show it beyond a doubt. It should be considered here that the food, on which the embryo is to grow into a young plant, and on which it depends entirely in the first stage of its growth, is contained in the parent seed, and consists of starch, gluten and albomen.

Moisture, warmth, air and a partial absence of light are essential to germination. When these conditions are supplied, the first change observed is a swelling, an enlargement of the seed. There is also formed early, within the seed, a minute portion of vinegar. As cider by fermentation, tends to become vinegar, and actually becomes such, if the fermentation be continued sufficiently long; so some portion of the seed is transformed into vinegar, or acetic acid. The object of this pretty clearly is, that the vinegar—acetic acid—may combine with bases immediately around and below the seed and form acetates, which we know to be very soluble, and may be regarded as a sort of pap for the infant plant, while yet it can neither reach after, nor could digest stronger food.

About the same time with the formation of vinegar, another substance is formed in the seed, called *diastase*. This substance, diastase, is known to have the power of transforming starch into sugar. That this is the object of its formation, there can be no doubt, for it actually performs this office. In a dry kernel of wheat there is no sugar. There is starch, a substance with which all are acquainted; there is gluten, a tough, stringy substance, which remains about one's teeth after chewing wheat a long time; and there is albomen, a liquid substance, similar to the white of an egg; but there is no sugar. If you taste a grain of wheat before it is put into the ground, you perceive no sweetness; but if you taste it after germination has commenced, you find it sensibly sweet. Diastase has then been formed; and it has done its office; it has transformed the starch into sugar. But why? The answer is plain. Starch, as every housekeeper knows, is insoluble in cold water; and only partially soluble in hot, forming with it, not a limpid solution, but only a thick, semi-transparent jelly. Sugar, on the other hand, dissolves perfectly in either cold or warm water, and forms with it a limpid solution, just adapted to the tender organs of the infant plant, when first it puts forth its rootlets to feel after food.—It is manifest, therefore, that the formation of vinegar and diastase in the germinating seed is a provision of that Being, who is wonderful in working, for the express purpose of furnishing nutriment to the plant, at a period when it could not otherwise obtain suitable food. If the husbandman will show a like care to give his young plants a vigorous start into life, he will prove himself a co-worker with the great Architect of all things His plants will take care of themselves bye-and-bye. By a prudent forecast, in preparing the soil and selecting the time, he should take care for their infancy. More than is generally considered depends upon the setting out of a plant on its summer's career;—not that, by due care of its infancy, it can be made so powerful that it will contend successfully with poke and pig-weed for the food of the soil; or that it will resist the encroachments of horned-cattle and swine; but if well started, it will draw for its productiveness, more largely than it otherwise would, from the soil and the air.

A portion of that which makes our crops grow is at our own disposal Another portion is in common stock, blown about by the winds of heaven Now if we use well that which is at our disposal, we get more from the common stock, for we make our plants more vigorous and far reaching in their efforts to take care of themselves. This is one of the many ways in which Divine Providence rewards the diligent husbandman. He, for instance, scrapes up a load of

manure, after his less diligent neighbors think he had got all. He puts it on his corn-field; he not only has a return for what he puts on but his applying it enables his young plants to gather as much more from the soil and the passing breezes.

There is another fact worthy of notice. It has been proved by the most accurate experiments that seeds, during their germination, and up to the time when the first leaves shoot forth, absorb oxygen and give off carbonic acid, directly the reverse of what takes place subsequently. Now why is this? Probably that the young plant may have plenty of carbon in solution about its roots, and may receive through those organs temporarily that which it is destined to receive from the air through its leaves as soon as they shall have been formed. It seems very much like a special provision for the plant, while in transition from the soil below to the atmosphere above. When the plant is fairly above ground, and has put forth its first leaves, it then draws its carbon, which makes not less than half of its solid matter, principally from the air, taking it in through its leaves; while it derives nearly all the other substances of which it is composed from the soil, taking them in through its roots.

Seeds then may be regarded as packages done up for the purpose of perpetuating the species to which they belong. Each package contains one or more embryo plants, so developed as to appear, under the microscope, almost precisely like the parent plant. Together with the embryo, and generally packed closely around it, is a rough, and in most cases, especially if the seed is perfect, much more than enough, of food to nourish the embryo plant, till such time as its roots can take nourishment from the soil and its leaves from the air. The embryo lies dormant till the circumstances required to arouse it to action are supplied. In a chestnut, for instance, while is a chestnut tree, not more perhaps than a thousandth of an inch in length, yet strongly resembling the full grown tree in all its parts.—It becomes no larger till warmth, moisture, and a partial exclusion of light are supplied. When these are furnished, it begins to enlarge itself, taking its food, first from within its own seed and then from the earth and air. Its enlargement, while feeding on the food specially laid in for it, is called the germination of the seed; its enlargement from that time onward, the growth of the plant. On this latter we shall have something to say in a future number, which may not be only interesting to the young, but useful in its application to practical agriculture.

N.

From the Plow, the Loom and the Anvil.

Chloride of Lime.

This compound may be formed from lime and salt. Salt, being composed of chlorine and sodium, will give up its chlorine to lime, if the two be mixed under favorable circumstances—making a compound, or rather, a *mixture*, in which chloride of lime will be a prominent part, but will be mixed with some quick lime, considerable caustic, soda, and perhaps a little hyperchlorite of lime. This compound or mixture is of a rather caustic nature, and should not be applied, in an undivided state, to the roots of plants; but we have long believed, that if reduced by a proper divisor, as swamp mud, leaf mould, or rich loom—or if mixed with barn manure at the time of its application, or while it is accumulating—or even if thoroughly incorporated with soil, without other division—it would be an excellent manure for worn soils, well worth the attention of farmers, at least in those parts of the country where the ingredients, lime and salt, can be obtained at a small price. Our only hesitation has arisen from the few favorable reports we have heard of it from practical farmers. Others may suggest ways and means of increasing the productiveness of land, but the farmer is the ultimate judge in these matters, and we have no respect for any prescription which does not, after mature trial, obtain his approbation. Hence, having seldom heard favorable reports of chloride of lime, we had fallen into a suspicion that it might not be all that we had once believed. But we see, in the *Germantown Telegraph*, an article over the signature B, which professes to give practical results; and though it does not smack as strongly as we could wish of the farmer's style, telling us what they have done and seen with their own hands and eyes, we publish it:

A FACT FOR AGRICULTURISTS.

Mr. Freas:—It is not, perhaps, so generally known as it deserves to be, that chloride of lime is one of the most valuable articles available for top-dressing grass lands. This substance is commonly purchased at the shops, and often at

a much greater cost than the cheapness of the materials entering into its composition legitimately sanction. Any farmer may make it.—To do this, it is only necessary to slack one barrel of good lime with water, allowing a little more water than will dry slack it, and reduce it to a thick paste. Then dissolve one bushel of common salt, using no more water for the purpose than will just take up the mineral. This may either be used in slacking the lime, or applied after the water used in effecting that process has been evaporated by exposure. Chloride of lime is a perfect deodorizer, and should always be kept on hand for use when wanted.—Made in this way, it will be found to possess all the virtues of the best article from the laboratory of the chemist, and cost less than one-twentieth the price. After being made it should be kept moist. Grass lands, top-dressed with chloride of lime, take a much earlier start, and retain their greenness much longer than those manured with other articles. It produces also a very favorable effect upon cereals—wheat, rye, oats, barley, and buckwheat—and has been used with success on corn, millet, and various other crops

Some years ago, we said, in a little volume denominated *The Progressive Farmer*, published by C. M. Saxton &c., 140 Fulton Street, New York:

Many families make use of chloride of lime as a *deodorizer*, or *disinfecting agent*. They pay for it ten or twelve cents a pound; and, at that, it is ineffectual, unless used in considerable quantities Peat is cheaper and better. When peat can not by any means be obtained, black, vegetable mould from the edge of the wood, or wherever great quantities of leaves have drifted together and decayed, will answer. If this can not be obtained, there is a sort of home-made chloride of lime, which can be prepared easily, and is worth more for agricultural purposes than it costs. To prepare it, take one barrel of lime and one bushel of salt; dissolve the salt in as little water as will dissolve the whole; slack the lime with the water, putting on more water than will dry-slack it, so much that it will form a very thick paste; this will not take all the water; put on, therefore, a little of the remainder daily, till the lime has taken the whole. The result will be a sort of impure chloride of lime; but a very powerful deodorizer, equally good for all out-door purposes with the articles bought under that name at the apothecaries, and costing not one-twentieth part as much. This should be kept under a shed or some out-building. It should be kept moist, and it may be applied wherever offensive ordors are generated, with the assurance that it will be effective to purify the air, and will add to the value of the manure much more than it costs.—It would be well for every farmer to prepare a quantity of this, and have it always on hand.

It will be seen that our way of preparing this compound differs a little from B's. The difference is not essential. Our way would give less redundant water to be got rid of, and would be a little easier. If any of our readers are in possession of facts which tend to show the value of chloride of lime for agricultural purposes, we should be glad to hear from them. N.

From the Wisconsin Farmer.

Transplanting Evergreens.

The following extract, from the recently published volume of Transactions of the Illinois State Agricultural Society, from the pen of J. C. Brayton, Esq., strikes us as particularly sound and practical in its character, and seasonable at this time for the lovers of evergreens in Wisconsin as well as Illinois. We commend it to the careful perusal of those who would add this most beautiful of all contrasting ornaments to their landscape scenery. His recommendation of native varieties in the main, in preference to those of foreign growth and doubtful hardihood, is in exact accordance with our own judgment and experience.

Then, again, the peculiar and delicate character of evergreens under removal and domestication, should fully admonish all not to throw away their money upon uncertain trees, at uncertain seasons of the year, and in uncertain hands, when the only probable certainty is that they will die out on your hands. Our own advice to all who can is to cultivate evergreens by all means, but to do it in the right way and in no other:

"Dear Doctor.—In looking for a subject with which to comply with your invitation to write an article for your forthcoming vol. of Transactions, I could think of none more likely to be of use to the cultivators of the soil of your beautiful prairie State, than that of successfully removing evergreens to it, where I know they appear more in place, and are more

ttractive than anywhere else perhaps. Our ative species have proved not only more hardy, nt more attractive than a majority of those ntroduced from foreign lands. My own experi- nce being principally with these, I shall em- ody the results of my own experiments, in re moving and transplanting them, in the shape f directions for the guidance of others.

Here I feel inclined to add that our native pruce (Abies Nigra) is more ornamental han the famed Norway, and this opinion is hared by other cultivators, who have both in his State.

BLACK OR DOUBLE SPRUCE, (*Abies Nigra.*)

This tree closes its growth here, and in its atural situation north, before the 10th of Ju- It may rarely make a second growth, but it does, we have not detected it. Young ees from the forest should be removed the st twenty days of July. Care must be taken selecting, as nine-tenths of those found owing are natural layers; and not more than ne in five of these is worth taking away, from eficiency in roots. If they are removed ear- , they lose their foliage in the spring months; d when so removed it is all lost at one time, consequence of the check given to the flow- g sap, and is not often renewed. The same fficulty is experienced in removing in the fall, d heeling in for the winter, the foliage all ells off in the spring in handling, and cannot, cept rarely, be coaxed into a renewal. The smallest plants are best for removal; ough we have planted those averaging eigh- n inches, the 10th of July, which were not refully selected—being nearly all layers—of ich the loss was fifty per cent; another lot last week in July, and a better selection, s forty per cent.

Seeds do not often germinate the first year. ne of gathering them, September.

BALSAM—BALSAM SPRUCE, (*Abies Balsamea.*)

Re-produces itself mostly from seed. Very ll plants of these may be obtained far north, this State and in Michigan. And these small nts are best for removal, as well as safest. e best, because when transplanted they pro- e branches from the ground; and the same rue of all varieties taken from the forest, or n any shaded situation.

Growth commences about the same time as iduous trees, and continues about six weeks: n the 20th of May to the last of June. It may be successfully removed at the time of the commencement, though safer after growth is closed—from the first of July to the middle of August—later, they do not get sufficiently established before winter, unless very deeply and thoroughly mulched. During this period scarcely any losses occur, except a portion of those deficient in roots. We do not shade the balsam here; but mulch thoroughly. Shading may however be well south.

Seed is apt to be blasted, if it is not, it germinates the first year. Time of gathering, August; later, the opened cones will have parted with all of it; when it is not easily gathered up.

WHITE PINE—WEYMOUTH PINE,—(*Pinus Strobus.*)

With the pines, we have no success in spring planting; but the best success with a small lot planted the last half of July, although the growth had not entirely closed for the season. From present knowledge we would choose the month of August for their removal. They are more irregular in the time of closing their growth than the balsam or spruce; but generally stop growing about or before the first of August, here.

Cones should be gathered early in September, when the squirrels begin to drop them off, to carry away to winter quarters. Then the gatherer, by approaching those trees where the red squirrel is engaged in dropping, may pick them up as fast as dropped; and by withdrawing when the squirrel is observed to be coming down, can use him the second or third time if he finds no cones to carry away on his descent; as he will immediately re-ascend, and recommence plucking with a hearty good will, until the thief is discovered.

We have planted the cones in June; part of the seed germinating in about two weeks.

ARBOR VITÆ—(*Thuja Occidentalis.*)

These may be successfully removed in July or August. And we have been successful in October, heeling in and planting out in the spring. They do not become defoliated like the foregoing. Is mostly re-produced from seed, although natural layers are by no means rare; but are worthless for removal, having but few side roots.

The seeds must be gathered early in August. Cones very small are obtained by climbing the trees. They germinate soon after planting,

without any preparation, and are much more easily raised from seed than any other variety which we have tried.

RED CEDAR, (*Juniperus Virginiana*,)

Of this variety we shall not say much, not having noticed particularly its season of growth and knowing it also to be a native of Illinois. We have not succeeded well in transplanting except early in May. When received among our lots of arbor vitæ and balsam, in summer, it seemed to be in a state of growth in mid summer, and did not succeed to satisfaction.

Our opinion is, that early spring is the safest time for their removal. The berries must be gathered early in October. Later, the cedar bird will have appropriated the crop. The pistillate trees, only produce berries; mix them with sand and bury until the second spring.

For the seed bed for any kind of evergreen tree, shelter must be prepared for the first season. We make a shelter over the bed by driving crotches three feet above the ground laying across poles, which are covered with a thick layer of branches, with the foliage adhering. But where a thicket is not convenient, a cloth tent, with the eaves raised about one foot above the ground, would be preferable to any other mode of sheltering; the suns rays being intercepted, but not entirely reflected, by thin cotton cloth.

The watering should be done by hand, in preference to depending on showers, dripping from boards or other medium. A shower from a watering pot, twice a week, is sufficient during the early part of summer; and once a week later.

In a bed twelve feet square several thousand seedlings may be raised, until transplanting time the second year.

For mulching, sawdust is perhaps preferable to any other substance, if attainable. We use about three-fourths of an inch in depth, on newly transplanted trees, and do not renew it the second year, though the plants would not be injured thereby. Chaff would doubtless be good, if not in too exposed a situation, where the wind would take it away.—Straw and other coarse litter does not lie sufficiently close to the plants, without much care in placing and confining it to its place.—Chopped straw would doubtless prove unexceptionable, if not too expensive.

But no care in planting out is sufficient, if the taking from the forest and packing for removal have been carelessly performed, as is too apt to be the case with those who go to the pineries to obtain plants for the southern market. A small rate per thousand being anticipated, the scrabble is rather to carry away a large number than to pack only such as will be sure to grow. If the latter object prevails, more than half of those taken up will be rejected, for want of roots. Those taken up must from the moment be shielded from the sun and drying, otherwise evergreen roots are hopelessly 'done for,' almost in a moment."

COW STABLES.—There can be no doubt that the very best stable for cows or oxen, is one where each animal can have a room or stall by itself, and large enough for it to turn round in But this would take a great space, and the farmer who had ten cows would require a larger barn than he would like to bestow on so small a herd. So the old way of tying them up pretty close together, with mangers divided off for each, will continue to be the most in use. But even in this mode there are various plans some of which may be better than others. The greatest fault we find in cow and ox stables generally, is this:—there is not space enough behind the cattle to allow people to pass easily.

A writer in the "Homestead" gives the following dimensions of one that he built twenty years since. His stable is 32 feet by 12. He says: "I laid an oak floor, 7 by 32 feet: a trough or box for roots, on the side next to the bay and nine pairs of stanchions, which hold the cows by the neck; one stanchion is movable at the top, and held in its place by a pin; when the cow is in her place, her hind feet rest fairly on the end of the platform, and no more, which lets the manure drop on a plank about seven inches below; this plank rests on a bed of muck about seven inches deep, and facilitates cleaning out. The muck absorbs all the liquid manure. This method keeps the cow perfectly clean."

We dislike the mode above named, for tying up cattle—although, as he says, it keeps them in one place and clean; but it is a hard thing for the cattle to be unable to turn the head, or shift positions a little.—*Maine Farmer.*

Salt water prevents colors from fading.

THE CAROLINA CULTIVATOR.

RALEIGH, DECEMBER 1856.

Gov. Swain's Lecture.

The Hon. D. L. Swain, President of the University of North Carolina, delivered, on Monday evening, December 1st, in the Commons Hall, in this city, the first of a series of lectures to be given by various eminent gentlemen before the Oak City Guards. The subject was North Carolina considered historically and geographically compared with other countries. The lecture was highly characteristic of its author, being replete with valuable statistical facts and interesting antiquarian explorations bearing upon our early history. It will soon be published, and read with avidity by many who had not the good fortune to hear it.

We understand the next lecture will be from Dr. Hawks, about Christmas.

Hog Trade in the West.

At St. Louis, on the 11th inst., pork was selling at 5 to 5½, for hogs weighing 200 pounds and over, and the same prices are offering for the delivery of hogs up to December 20.

The latest dates we have received from the following places furnish the following prices:

At Havanna, Illinois, pork 5 cents gross.

Lincoln, Illinois, pork, gross 4 to 4½ cents.

Oquawka, Illinois, pork, gross, 5 cents.

Sandy Mines, Missouri, 5 cents gross.

Auburn, Missouri, 4½ to 4¾ cents.

Ritchfield, Missouri, from 3 to 4 cents.

Knoxville, Missouri, selling at 3 to 3 1-4 cents.

CINCINNATI, OHIO, Nov. 10.—The demand was dull, and prices drooping, at 6⅛ to 6 1-4.

CHICAGO, Nov. 10.—Supply light, and selling dressed hogs at 5¾ to 6. These rates are beyond the views of packers there.

N. C. STATE AG. SOCIETY—EXECUTIVE COM.—We are requested to give notice that there will be a meeting of the Executive Committee of the State Ag. So., held on Tuesday the 9th day of January next, in this city.

Exchanges.

We have received the following Periodicals for December—

GRAHAM'S MAGAZINE is as elegant and attractive a publication as the country can boast. It has a style of its own in which it is unrivalled.

GODEY is universally admired for its feminine character. It is the princess of American Magazines, and will continue to be popular wherever good taste regulates the literary appetite of the ladies.

HOUSEHOLD WORDS is an unembellished reprint of a popular periodical controlled, if not conducted, by Dickens. The reading is always spirited and entertaining, often elevated and instructive.

THE LADIES' REPOSITORY is a handsome monthly, usually well filled with serious reading for the female public. Its tone is good, and its aims worthy of the highest commendation.

PUTNAM is as usual stored with large supplies of valuable matter, but it is so highly charged with partizan and sectional feeling, that we cannot commend it to our readers. It is shameful to make a literary magazine, the monthly vehicle of political prejudice.

CHARCOAL AND SALT FOR HOGS.—One of the best articles that can be given to swine, while confined, is charcoal, pulverised, and common salt. Salt and sulphur are very good articles, and should be constantly supplied. We would not, however, be understood as urging the necessity of keeping those articles continually by them, or introducing them daily into their food. Tho first is necessary to obviate tho bad tendency of certain kinds of aliment, and should be supplied in quantites varying from one pint to two quarts, as often as once or twice a week. Salt should always be introduced as a seasoning in food. When it is not so used, it should be given twice a week, or it may be placed in a box in the stye to which the animals can have access whenever they wish to partake.—*Germantown Telegraph.*

For the Carolina Cultivator.

Chinese Sugar Cane and Georgia Syrup.

Messrs. Editors—I feel it my duty to make known to the Southern public the result of my Syrup making from the Chinese Sugar Millet, in hopes that others who have sown this valuable variety of the Millet, may be induced to work it up into Syrup this season.

I send you a few joints of the Cane and a sample of the Syrup, of which I have made several barrels.

I obtained my start of seed during the Spring of 1855, from D. Redmond, Esq., of the "Southern Cultivator." I considered it a "humbug," from its close resemblance in seed and growth to the "Guinea Corn," until my children, towards fall, made the discovery of its being to their taste equal to the true Sugar Cane.

This year I planted one patch, April 15th, another May 18th, near Calhoun, Gordon county, on land that would produce, during a "sea sonable" year, forty bushels of Corn per acre, and this year not over twenty bushels.

Seed sown carelessly in drills, three feet apart, covered with a one-horse plow; intending to "chop out" to a stand of one stalk six inches apart in the row; but failed to get a good stand, as the seed came up badly from the deep and irregular covering. Worked out, same as for Corn, plowing twice and hoeing once.

By suggestion of Gov. Hammond, of South Carolina, I determined to give the Syrup-making a fair trial; consequently ordered from the Messrs. Winship, of Atlanta, a very complete Horse-power Mill, with vertical iron rollers, that has worked admirably, crushing out juice for eight gallons of Syrup per hour, worked by two mules, with one hand to put in the Cane, and a boy to drive.

On the 13th of this month, finding the seed fully ripe I had the fodder pulled, and the seed heads cut.

Yield of fodder per acre, 1,100 to 1,300 lbs

Yield of seed per acre, 25 bushels of 36 lbs to the bushel.

First trial of Mill, 70 average canes gave 20 quarts of juice.

606 average canes, passed once through the rollers, gave 38 gallons 1 quart of juice; passed a second time through, gave 2 gallons of juice; the 40 gallons, 1 quart, gave 8 gallons thick Syrup.

I carefully measured an eighth of an acre, having the best canes, and the best stand, another eighth having the poorest stand. The result I give below, the canes having passed once through the roller.

BEST EIGHTH OF AN ACRE.

Yield of juice from 3,315 Canes,	253	gallons.
" of syrup from 253 gals. juice	58½	"
Rates per acre of syrup,	468	"

POOREST EIGHTH OF AN ACRE.

Yield of juice from 2,550 Canes,	179	gallons.
" of syrup from 179 gals. juice,	43¼	"
Rates per acre of syrup,	346	"

Weight of 30 selected Canes,	49½	lbs.
" " Juice pressed out,	25¾	"
" " Crushed Cane,	23	"
Loss in crushing,	¾	"
Weight of crushed cane dried in sun	9⅛	"

The following tests were made at the mill, by Dr. Robert Battey, of Rome, Ga., a graduate of the Philadelphia College of Pharmacy:

Specific gravity of juice,	1.085
" " syrup,	1.335
" " N. Orleans syrup,	1.321
Thermometer applied to syrup,	77°
" " juice,	70°
Saccharometer " juice,	25½°

The juice should be placed in the boilers immediately after being pressed out, then boiled slowly, until the green scum ceases to rise; then stir in a tea-spoonful of air-slacked lime to five gallons of juice; continue skimming and boiling until the syrup thickens and hangs down in flakes on the rim of the dipper.

I have made the clearest syrup by simply boiling and skimming, without lime or other clarifiers.

The lime is requisite to neutralize a portion of the acid in the juice; the true proportion must be determined by well-conducted experiments.

The cost of making the Syrup in upper Georgia, in my opinion, will not exceed ten to fifteen cents per gallon. This I shall be able to test another season, by planting and working up fifty acres of the cane.

I am satisfied that this plant will enable every farmer and planter in the Southern States to make at home all the Syrup required for family use; and I believe that our Chemists will

soon teach us how to convert the Syrup into Sugar, for export, as one of the staples of our favored clime.

Obtaining such unlooked for success, with the Chinese Sugar Cane, I concluded to try our common Corn. From a "new ground," planted 3 by 3, one stalk to a hill, a week beyond the roasting-ear stage, I selected thirty stalks.

Weight of 30 stalks,	35¾ lbs.
" " juice,	15¼ "
" " crushed stalks,	19½ "
Loss in crushing,	½ "
Yield of Syrup,	1½ pts.

The Syrup of a peculiar disagreeable taste, entirely unfit for table use.

RICHARD PETERS,
Atlanta, Georgia.

September, 1856.

From the New England Farmer.

Green Corn for Soiling.

I have read with interest the number of the N. E. *Farmer*, containing Mr. Blakely's article on green corn for soiling, and I well remember the article in the Oct. No. referred to by him. I was sorry, then, that the writer did not give his manner of feeding, for very much depends on that, more than many farmers seem to think. But Mr. Blakely has told us how he feeds green corn, and I have observed that those farmers who have not found, on trial, green corn and other green food to be beneficial, have generally used it as he has done. He says, "Three years ago, I fed seven cows quite liberally, for a month or more, on green stalks. My custom was to feed in the morning, as it was the only convenient time of doing it, and to scatter the stalks over a portion of an adjoining pasture on which they had not of late been fed, so as to give them much more than they would immediately consume, which they would generally finish off in the course of the day." Now, I beg leave to say to Mr. B., and to all others who pursue his course, that that is not the way, and that that makes all the difference.

Then he says, "I could not perceive that the stalks made much if any difference in the quantity of milk produced; but the cows continued to give less, about as the grass failed them, although they continued to consume a proportionably larger amount of stalks." He does not say whether his cows, finally, to cap the climax, jumped the fence between his cornfield and the "adjoining pasture," and ate to excess of the corn which they had so long been impatiently waiting and reaching for; but if they did not, he may consider himself a fortunate man, that his experiment terminated no worse.

And now, by the way, is there any kind of food that cows ever eat that has not been by somebody condemned as useless, or injurious? Some of our so-called best farmers have their doubts in regard to carrots as a food to make butter from, (except they be grated and churned with the cream) and very few would dare to feed milch cows on apples, sweet or sour; and still others withhold turnips, both tops and bottoms, because they have heard that some body had a whole churning spoiled so, once; don't doubt but what they did, but the cause was not in the food, but in the way of giving it; and I say again, that makes all the difference. Now we are not afraid to feed any or all of these different kinds of food to milch cows, our trouble being to get enough of them. Having a cold, sour pasture, that wont keep any cow well, I am obliged to raise corn or some kind of feed not found in the pasture, for my cattle, both cows and oxen.

I might keep poorly, three or four cows through the summer, by letting them have the after feed in the fall on all mowing lots, but by raising from a half to three-fourths of an acre of corn fodder, I am able to keep six or seven well, and that without feeding down my mowing fields, so as to spoil them for succeeding years. In the spring, and before the corn fodder can be grown, I feed with good English hay at night and morning, allowing the cows to get their dinner in the pasture. In the morning, all that give milk have an extra feed of shorts, or some kind of meal, wet up thin in some kind of water, and always given when in the stall. When the corn is grown enough, I cut and haul it to the barn in a cart, enough at a time to last two or three days; then give at two or three feedings as much as they will eat up clean, butts and all; which is a good deal, especially during the driest part of the summer. And this I do every night and morning, from July till into October, or till the frosts spoil the corn; and always in the barn, so that they expect it nowhere else, and when

they are turned out into the pasture, they have nothing to hinder them from feeding on such as they may find in the pasture. They are seldom seen lingering around the confield, or knocking stones off from the walls, by endeavoring to get where they ought not to be; nor do they ever learn to jump or throw fence, as cattle are always inclined to do, when fed with stalks, pumpkins, &c., from the cornfield.

And now, you have been shown another way; is it not the way that makes all the difference? It gives us the means to keep nearly twice as much stock through the year as we could without the green corn, for while we are feeding the corn in the barn, we are making, or saving a great amount of manure, that we could not if we fed it in the pasture. And then, by keeping our cows *out* of the afterfeed, we get much more hay the next year with which to winter our extra number of cows above what might be kept in the pasture alone during the summer. Then, during the dry weather, and usual short feed of August and September, our cows are less affected than those that have no green corn. Speaking of manure, I should have said that by stabling the cows every night (which we should hardly have thought of, had it not been for feeding purposes) we can make fully as much manure as at any part of the year.

The corn should be planted at intervals, so that it will not ripen all at once but continue along through the whole season. The large kinds of sweet corn are best. There are several ways of planting and tending it. I have, of late, spread all the manure, planted in rows, eighteen inches apart, and in the row, four or five inches with a seed-sower or corn-planter. Then draw a cultivator tooth between the rows by hand, a few times, before the corn gets high enough to shade the ground. After that it takes care of itself.

If Mr. B. wishes to prove that Indian corn is not good food for hogs, let him feed them as he did his cows, throw enough good ears over to them in the morning to last them all day.—Has he never seen farmers do that? And have they not generally had small, uneasy and squeeling hogs? But let us feed corn, or any other good feed, to hogs at their trough, and in proper quantities, and at proper times, and they fatten kindly and contented. So I believe we may all feed cows with any kind of food which they love, having due regard for quantity, times and places, with equally favorable results. A. W. C.

Management of Barn Manure.

The article below, which we have taken from the *Working Farmer*, contains the most correct practical directions for the management of manures that we have met with. The necessity of decomposing barn-yard manures, before applying to the soil has long been apparent, but the labor of turning and returning where help is so scarce and high, has been an objection which compelled the hauling out in a green or unfermented state, and thus save hauling. By Prof. Mape's method, the quantity of manure is greatly increased and the labor of rotting by keeping the mass moist, and introducing the oxygen of the air by the filtering of the water, is so much lessened that nearly every farmer may adopt the plan:

After a very thorough series of experiments in all the known methods of managing manures, we have arrived at the following, viz:

First, to have in the immediate vicinity of manure sheds, many hundred loads of meadow muck composted with the lime and salt mixture, and not applied to the muck until after the chemical changes have taken place, which converts the mass of lime and salt into chloride of lime and carbonate of soda, in the manner set forth in the *Working Farmer*. This muck soon looses acidity, and by the effect of the soda is rendered fine like ashes; this we call our divisor, and its use is as follows, viz: Whatever fertilizer we may use at any time, is mixed with a large quantity of this divisor; and when of an ammoniacal kind, like guano, the ammonia is retained by the muck and not lost to plants, while the muck itself supplies the soil with organic matter, stiffening sandy soils and rendering them retentive of manures, while clay soils are made less adhesive by its use.—When manures of a non-volatile character, like nitrogenized super-phosphate of lime or ashes, are used, then the divisor ensures their more general diffusion through the soil, and experiment has proved that a less quantity will produce a greater effect when thus divided.

We manage our barn-yard or stable-manures thus:—

Adjacent to stables and barn-yards are covered sheds, under which the manures are evenly spread each day, and immediately covered with eighteen times their bulk of *the divisor*, and thus the compost is continually being augmen-

ed in quantity. At the lower end of this shed is a cistern supplied with a pump; the drainage of the compost heap runs to this cistern, and it is pumped on top the compost heap each day. When the mass is too dry to supply drainage, we run in water and pump it on the heap.—This continuous supply of water or drainage passing down through the compost, furnishes all the conditions for rapid decomposition without *fire-fanging*. As fast as the dung decomposes, the parts rendered soluble are transferred in solution to the *muck divisor* in layers through the heap, and thus the whole mass becomes homogeneous like soap, the straw losing its fiber, and the quantity not lessening, as in the usual barn-yard practice where covered sheds are not used. It will readily be seen that nineteen times as much manure is thus made, so far as bulk is concerned, from the solid portions of the manure alone, as would have occurred in the open barn-yard without the use of the eighteen proportionals of *the divisor*. The fluid manures of the stables, which we consider to be of equal value with the solid portions, are carefully preserved by either of the two following methods. They may be conducted by tight gutters to the compost cistern, or they may be preserved by cutting a gutter in the stable in the direction of its length, and immediately under the hind feet of the animals. This gutter may be two feet deep, and three feet wide, of semi-circular form It should be kept filled with the *divisor*, so as to absorb the urine as fast as supplied, and thus secure the bedding placed above it from remaining wet. This divisor also absorbs not only the ammonia of the urine, but also the gasses given off from the bodies of the animals, breath, etc., and by so doing secures the health of animals and prevents many of the ills arising from imperfect ventilation. The contents of this gutter should be removed to the compost heap frequently, and a fresh quantity supplied in its place.

The advantages of this cistern arrangement are many. When liquid manures are desired, as in gardening, they may be had from the cistern, and the deficiency supplied by more water. Each passage of this water will recharge the fluid portions with the part of the constituents rendered soluble by chemical changes.—When the fermentation is found to be too rapid, the addition of a small quantity of sulphuric acid to the cistern will convert, by its passage through the mass, all the volatile salts of ammonia into the non-volatile sulphate of ammonia, and thus secure it from loss. The turning over or forking of the mass is rendered unnecessary, for the alternate action of moisture and air, for air must follow the downward passage of the fluid, will more thoroughly free and disseminate the proximities as developed, than would any practical number of forkings or turnings. As a further inducement for this arrangement, it supplies a ready method for disseminating any constituent which analysis of the soil may show to be requisite. Thus, if the soil be deficient of potash, phosphates, sulphuric acid, chlorine, or any other constituent, which may be supplied in soluble form, they may be thrown into the cistern if in solution, and upon the mass if slowly soluble, and by the frequent passage of the drainage be disseminated as fast as dissolved. The top of this heap should be always *cup-shaped*, by keeping the sides slightly higher than the centre. If at any time the compost is supposed to be too compact, holes may be made with a crow-bar, to more readily admit the fluid, from the sides of which holes the fluid can travel horizontally through the mass. The entire absence of odor from such a compost, when properly attended by the frequent use of the pump, proves its economic use. Some farmers having this arrangement, pass the results of privies, cess pools, etc., into the compost cistern.

Preservation and use of Agricultural Journals.

As the volume of most periodicals closes with their year, it is an appropriate time to make some suggestions upon their use. To begin with—Carefully preserve your agricultural papers. After reading the papers as they come out, have a place for them where you can lay your hand on them at any moment, while waiting for meals or for anything else. A distinguished scholar is said to have acquired a language in odd moments, when waiting for breakfast. Every farmer has at times leisure in his family, which may be well occupied in referring to facts which have excited his interest in the first reading of the papers. Have a place, then, for them; and be very careful how you lend them. If your experience is anything like the writer's, it will be a losing

business, both to yourself and to the borrower. Ten chances to one, the paper will not come home at all, or if it come it will be minus one or more leaves, or plus a little soil which has ceased to be free. In that case, your volume is broken or injured for binding, and you are the loser. It is equally a bad operation for the borrower; for so long as he lives by borrowing he will not take and pay for any agricultural paper for himself, and what he reads or learns of his business will be superficial. "A little learning is a dangerous thing" in farming. Better pay for a second paper for your neighbor than to be without your own.—The merchant might as well lend his ledger, the scholar his text-books, or the Christian his Bible.

At the close of the volume bind up the numbers, and put them on the shelf among the books. If you are flush, and live near a bookbindery, get the man of sheep skin and muslin to give your volume a handsome dress; but if mother wit is more plenty with you than the coin, and you have a yankee's skill in the use of tools, do the binding yourself. A table, a twine, will furnish you for the work. Put your numbers in regular order upon the table or board, then with your awl, make three holes at suitable distances apart, and with the twine and needle make the numbers fast. If you wish a cover to the volume, put a coating of glue upon the back, and put over a stiff sheet of wrapping paper, and trim it off to the size of the book. Put the name of the work upon the back, and the No. of the Vol., and your binding is finished.

You have now preserved you volume. No number, containing just the information or experiment you want, will be lent to your neighbor, or stray away into the miscellaneous pile of newspapers, and be hustled off into the garret by the good housewife, who loves so dearly to have every thing packed away in its place. The next thing, after preserving the papers, is to use them. If an agricultural paper is worth reading at all, it is worth studying, until you thoroughly comprehend its teachings. If your paper is merely an appendage to an agricultural seed or tool store—a vehicle of puffiing this man's potatoes or that man's plow—it would be better to change it for one that has no axe of its own to grind, but stands ready to do the needful by you. There are practical scientific farmers, as well as seedsmen, in the editorial field, and there is a choice in papers, as well worthy of your attention as a choice of seeds or a choice of stock. If the editor of your paper is accomplished in his profession, take him as a standard, and his teachings for your text book, until you can find a better. Study your textbook, for it contains not only the news of your business, but its fundamental principles. There is a grammar of agriculture, which needs to be fastened in the memory, and inwardly digested. These principles are as essential to your success, as the principles of Blackstone and kindred text books are to the lawyer. The lawer has also his reports and book of cases, with which it becomes him to be familiar.—Your bound volumes contain your reports and record of cases. Many of the experiments therein recorded would be an improvement upon your present style of farming, if you would adopt them. They would give you larger crops with less expense, and show a great difference in the annual income of the farm.—If the writer has derived any benefit from agricultural papers, it has been gained by studying their principles and following their teachings. If any one can grow corn, or any other farm crop, more economically than yourself, it is for your interest to learn the method and put it in practice. We say, then, preserve your papers and use them. They will beguile you of many a weary hour in stormy weather or in winter, and furnish you with material for reflection when your hands are busy.—*The Homestead.*

How to do up Shirt Bosoms.—We have often been requested by lady correspondents to state by what process the gloss on new linens, shirt bosoms, &c., is produced, and in order to gratify them, we subjoin the following receipe:

"Take two ounces of fine white gum arabic powder, put it in a pitcher, and pour on it a pint or more boiling water, according to the degree of strength you desire—and then, having covered it, let it stand all night—in the morning pour it carefully from the dregs into a clean bottle, cork it up, and keep it for use. A table-spoonful of gum water, stirred in a pint of starch, made in the usual manner, will give to lawns, either white or printed, a look of newness, when nothing else can restore them after they have been washed."—*Chicago Western Enterprise.*

Principles of Drainage.

It is well known that attempts have been made to establish, in regard to drainage, a uniform system, as to depth, spaces, &c., for all soils and localities. Some of the statements of the advocates of this system have lately been strongly controverted and their unsoundness pointed out. At the last half-yearly meeting of the Royal Agricultural Society, the subject was brought under discussion, when the President of the Society, Lord Portman remarked—"There was and can be no uniform system of drainage," and proceeded to support the proposition by various arguments. The editor of the *Farmers' Magazine* has taken these words for a text, and made them the basis of an able article illustrating some of the principles of drainage.

The importance of drainage in this country, and the want which is here felt of more light in regard to the subject, induces us to copy nearly at length, the article alluded to—confident that in its careful perusal many of our readers will obtain ideas of much practical value.

The article is prefaced by some remarks in regard to the value of Lord Portman's proposition, especially from "the weight which it will have in the scale, to equipoise, so to speak, that unsettled state of the public on all questions of drainage at the present moment, as exemplified in the diversity of opinion which exists among farmers and draining engineers, in the abortive attempts to set up rival systems of drainage, for the purpose of procuring patronage, in the large sums of money which have been improperly and profitlessly invested in drainage, and in the still larger demands being made upon the pockets of landlords and tenants for capital and redeeming interest. We have long wanted firm and decided support from this quarter, and beg to thank the noble lord for his timely reply to the fallacious views of those who advocate a uniform system of drainage for all sorts of soils.'

The main subject is then considered, as follows:

The two principal heads into which the proposition divides itself are—(1) To determine by experiment the depth at which drains should be placed in the soil, the diameter of pipes, and distance between drains; and (2) every individual experiment can only determine the drainage quality of the soil in which it is made.

That the depth of drains, their size, and distance between, should be settled by experiment on a small scale before the general work of draining a field, farm, or estate is commenced, in every different kind of soil, is obvious from the very fact that they are ultimately thus settled in every case, rainy seasons testing the accuracy of every man's work.

Again: the very nature, to be allowed the expression, and object of a drain demand experiment, so do different soils. What, for example, is a drain? Is it an active or a passive agent? Does it discharge more water at three feet below the surface than at two, to four feet than at three, and so on according to depth? What is the soil in a draining sense? Will more water percolate through it to a drain at three feet below the surface than at two? at four feet than at three? And it is true that the greater the depth at which drains are placed, the greater may be the distance between them? These are plain questions in the branch of science, susceptible of an easy answer, all of them having already been solved by experiment.

Reviewing them in the order stated, a drain is merely a passive instrument through which water flows by the force of gravitation, analogous to the water of an open ditch or river.—On the adjacent soil it produces no draining effect whatever, but the contrary; for when bedded in clay, the ramming of the pipes into the bottom, so as to get them "level," as it is said, or in a line, consolidates the soil, producing an opposite effect of drainage.

Also opposed to gravitation are the friction and adhesion of the water in the interior of the pipe, and the action of water percolating into it at the joinings. Friction will be inversely as the diameter of the pipe; and the other forces, directly as the agitation of the flowing current.

The velocity of the water in different drains will consequently be as the square roots of the respective sines of their angles of inclination, minus the effect of these counteracting forces.

And with regard to discharges at different depths, the force of gravitation, strictly speaking, will be inversely as the depth, it being *nil* at the centre of the earth, but for all practical purposes it may be said to be equal or uniform; consequently discharges will be equal, the angles of inclination and counteracting forces being also equal. In other words, drains at the depth of two feet will discharge as much water

as those at three feet, other things being equal.

In the next place, with regard to soil, the forces opposed to gravitation will depend upon its quality. Though acting perpendicularly, in no case will the velocity of water in passing through the atmosphere or free space, but the contrary, the density of the soil being directly as the depth, generally speaking. In many clay soils the force of affinity is even greater than the force of gravitation, so that no percolation can take place until they are acted upon and changed, as by the sun, &c., &c. In a word, between the two extremes of impervious clay and open gravel there is an innumerable variety of soils, all different from each other in their drainage qualities, and consequently admitting different quantities of water to percolate through them in a given time to drains.

Again: percolation being horizontal, as well as perpendicular, the next question for consideration is—Will more water percolate horizontally through soil at the depth of three feet from the surface than at the depth of two, and at four feet than at three? And to this the obvious answer is that density being directly as depth, percolation will consequently be inversely; in other words, a greater quantity of water will percolate horizontally through any soil of a uniform geological quality at the depth of two feet than at three, and at three than at four.

And lastly, we come to the conclusion from above data, that the deeper drains are placed in the soil, the less must be the distance between them. In other words, that the distance between drains should be inversely as their depths; for as the weight of the superincumbent soil consolidates that on which it rests more closely than itself, it therefore follows that less water will percolate through the soil at the depth of four feet in a given time than at the depth of only three feet.

And with regard to experiments, the second head of our subject, each exemplifies its own results, affording data only applicable to soils similar in every respect; so that every different kind of soil requires a different course of experiments, to determine in what manner it can be drained most successfully. And in carrying out experiments for the purpose of ascertaining the proper depth of drains and distance between them, say for one field, a single experiment is not sufficient, not merely because a different depth and distance [illegible] better, but because of the [illegible] and climates, a wet or [illegible] dry, or *vice versa*, in either case.

It will thus be seen, without further detail, that the experimental part of the subject, in order to ascertain what system of drainage will produce the greatest increase of produce, at the least outlay of capital, on every different kind of soil, is not the least important of the two, and that it calls upon the landed interest as a body, to carry into practice the invaluable suggestions of Lord Portman without delay.

Under both of the above heads we have supposed the soil of uniform geological quality, being only different in density, which in practice is rather perhaps the exception than the rule, drains being more frequently cut through drifted soils, each diversified in quality, than through uniform, and through diversified layers or stratifications, than uniform formations.—But conceding this is a fact, it does not in the slightest degree alter the established doctrines of applied science as we have given them above, but the contrary, while it more imperatively calls upon the landed interest to have resource to experiment to ascertain the drainage quality of every soil thus diversified at different depths. At present the misfortune appears to be this, the work of drainage or percolation of the water to the drains taking place under ground, it is therefore imperceptible to the eye, thus leaving the mind to grope in the dark for the facts of the case at issue; and when we consider how few are masters of physical science, controversy need not be wondered at, nor the crude notions which some entertain and publish as their experience. On the other hand, nothing can be further from the utilitarian spirit and exigencies of the age in which we live, than the continual appeal of farmers, draining engineers, and even landlords, to their experience in support of conclusions which never had a being save in their own imaginations—conclusions which disappear, like the dew on the grass, the moment they are brought to the bar of practice to undergo the test of properly conducted experiment. While the rhetorical parade of book-learned professors into the regions of speculative geology to settle practical questions is hardly more to the purpose, being to scientific and practical farmers, who comprehend their subject, "as sounding brass and a tinkling

cymbal;" for well-conducted experiments are as much wanted to ascertain practically the geology of soils as they are to ascertain their drainage qualities; and as both could be made at one operation, land owners could thus "fell two dogs with one bone," advancing geological and draining science with the improvement of their estate.

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Table of Contents.

	Page.
Annual Address, [Continued from last No.]	290
Cashmere Goats,	298
Chloride of Limo,	301
Cow Stables,	304
Exchanges,	3 5
Fattening Turkeys,	297
Growing Chinese Sugar Cane,	297
Gov. Swain's Lecture,	305
Green Corn for Soiling,	307
Hog Trade in the West,	305
How to do up Shirt Bosoms,	310
Management of Barn Manures,	308
Medical Notices,	313
Preservation and Use of Agricultural Journals,	309
Principles of Drainage,	311
Stabling for Horses,	295
Transplanting Evergreens,	302
Vegetable Physiology,	300

Advertisements.

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THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed, with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached to it. It is a cheap safe, and certain protection against danger. It can be attached to old or new vehicles.

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Raleigh, Feb. 14, 1856.

AYER'S PILLS.

A new and singular y succesful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousuess, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but effectual Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the hearses all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characteras to forbid the suspicion of untruth.

Among the many eminent gentlemen who have testified in favor of these Pills, we may mention:

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Robert C. Winthrop, Ex-Speaker of the House of Representatives.

Abbott Lawrence, Minister Plen. to England.

†John B. Fitzpatrick, Cath. Bishop of Boston.

Also, Dr. J. R. Chilton, Practical Chemist, of New York City, endorsed by

Hon. W. L. Marcy, Secretary of State

Wm. B. Astor, the richest man in America.

S. Leland & Co., Propr's of the Metropolitan Hotel, and others.

Did space permit, we could give many hundred certificates, from all parts where the Pills have been sned, but evidence even more convincing than the experience of eminent public men is found in their effects upon trial.

These Pills, the result of long investigation and study, are offered to the public as the best and most complete which the present state of medical science can afford. They are compounded not of the drugs themselves, but of the medicinal Virtues only of Vegetable remedies, extracted by chemical process in a state of purity, and combined together in such a manner as to insure the best results. This system of composition for medicines has been found in the Cherry Pectoral and Pills both, to produce a more efficient remedy than had hitherto been obtained by any process. The reason is perfectly obvious. While by the old mode of composition, every medicine is burdened with more or less of acrimonious and injurious qualities, by this each individual virtue only that is desired for the curative effect is present. All the inert and obnoxious qualities of each substance employed are left behind, the curative virtues only being retained. Hence it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

As it is frequently expedient that my medicine should be taken under the counsel of an attending Physician, and as he could not properly judge of a remedy without knowing its composition, I have supplied the accurate Formulæ by which both my Pectoral and Pills are made to the whole body of Practitioners in the United States and British American Provinces. If, however, there should be any one who has not received them, they will be promptly forwarded by mail to his address.

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The composition of my preparations is laid open to all men, and all who are competent to judge on the subject freely acknowledge their convictions of their intrinsic merits. The Cherry Pectoral was pronounced by scientific men to be a wonderful medicine before its effects were known. Many eminent Physicians have declared the same thing of my Pills, and even more confidently, and are willing to certify that their anticipatious were more than realized by their effects upon trial.

They operate by their powerful influence on the internal viscera to purify the blood and stimulate it into healthy action—remove the obstructions of the stomach, bowels, liver, and other organs of the body, restoring their irregular action to health, and by correcting, wherever they exist, such derangements as are the first origin of disease.

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For Power, brilliancy and richness of tone, elasticity of touch, and beauty of finish, they will not suffer in comparison with those of any other manufacturer, and those desirous of obtaining a really good Piano-Forte—one that will prove an equivalent for their means, will find such a one in your beautiful instruments.

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Pianos and Music.—We learn that Horace Waters, 333 Broadway, N. Y., agent for the sale of many the most celebrated makers of Pianos and Melodeons, is offering them at prices which we advise all who desire to purchase to avail themselves of. He is also selling his large and well kuown Catalogue of Music at one-third off from the regular prices, and will forward the same free of postage. His offers to the trade, teachers, and schools, are of the most favorable character—all of which he will be able to fill to the letter, for having wisely adopted the cash system. The Horace Waters' Pianos are known as among the very best. We are enabled to speak of those instruments with some degree of confidenc e, from personal knowlege of their excellent tone and durable quality.—*N. Y. Evangelist.*

The treble is clear, pure, powerful, and very melodious, the base is deep, rolling, and sonorous; the middle part is rich, and sympathetic, and possesses the power of singing, *i. e.* of uniting the sound of each tone, in a degree but rarely achieved.

Henry C. Watson.

September, 1856. 7—tf.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. Cooke, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

Executive Office,
Raleigh, Jan. 26, 1856.

Mr. William D. Cooke has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

Dear Sir:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
WILL: A. GRAHAM.

January 26th, 1856.
Wm. D. Cooke, Esq.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

Report of Professors Emmons and Mitchell, to the North Carolina State Ag. Soc., on

COOKE'S NEW MAP OF NORTH CAROLINA.

I have had frequent opportunities of testing the correctness of Mr Cooke's new Map of North Carolina, and parts of the adjoining States. This Map is worthy of special notice: 1st, from the fact that it embraces those parts of Virginia, South Carolina and Tennessee which are of immediate interest to the citizens of this State. 2d, that the eastern part of the State is compiled from data obtained through the determinations of the Coast Survey. 3d, it contains an entirely new feature in its *profile* extending along the line of the Railroad survey from Goldsboro' to Asheville, which exhibits the heights of many interesting points, as well through the central and western parts of the State lying east of the mountains as amongst the Mountains themselves.

In addition to the foregoing it may be justly said that Mr Cooke has taken unwearied pains to correct the geography of the different counties, and to insert the prevalent names of places, those for instance which have come into use since new lines of travel have been established. It is in fact a New Map, and the only map which can be relied upon for accuracy in its details. It moreover merits commendation for the artistical skill displayed in its execution, its typography being beautiful and distinct.

EBENEZER EMMONS, State Geologist.

In the encomium passed by Prof. Emmons, upon Mr. Cooke's new Map, I fully concur. The particulars mentioned by him are of first rate importance and interest. Most of the maps of the State, heretofore published, have furnished few, if any, indications of the position of any point within our own limits, with regard to the States, north, south, or west of us. This evil has now a remedy. In noticing the map, the very efficient and important aid, in its construction, so fully afforded by Prof. A. D. Bache, Superintendent of the United States Coast Survey, and by Col. Gwynn, having the management of the Survey of a railroad, carried over the Blue Ridge into the valley of the French Broad, should not be passed in silence Only the portion of the map representing the eastern part of the State has been submitted to my inspection, but to this I presume, the rest will be made to correspond.

E. MITCHELL.

University of N. C., October 21, 1856.

THE CAROLINA CULTIVATOR.

Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WILLIAM D. COOKE, Editor, and Publisher.

VOL. 2. RALEIGH, N. C., JANUARY, 1857. NO. 11.

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Horned Cattle—The Points by which Live Cattle may be judged.

Were an ox of fine symmetry and high condition placed before a person not a judge of live stock, his opinion of its excellencies would be derived from a very limited view, and consequently from only a few of its qualities. He might observe and admire the beautiful outline of its figure, for that might strike the most casual observer. He might be pleased with the tint of its colors, the plumpness of its body, and the smoothness and glossiness of its skin. He might be even delighted with the gentle and complacent expression of its countenance. All these properties he might judge of by the eye alone. On touching the animal with the hand he could feel the softness of its body, occasioned by the fatness of the flesh. But no man not a judge, could rightly criticise the properties of an ox further. He could not possibly discover without tuition, those properties which had chiefly conduced to produce the high condition in which he saw the ox. He would hardly believe that a judge could ascertain, merely by the eye, from its general aspect, whether the ox were in good or bad health—from the color of its skin whether it were of a pure or cross breed—from the expression of its countenance whether it were a quiet feeder—and from the nature of its flesh, whether it had arrived at maturity or not. The discoveries made by the hand of a judge might even stagger his belief. He could scarcely conceive that that hand could feel a hidden property—the touch—which of all tests is the most surely indicative of fine quality of flesh, and of disposition to fatten. It can feel whether that flesh is of the most valuable kind; and it can foretell the probable abundance of fat in the interior of the carcass. In short, a judge alone can discriminate between the relative values of the different points, or appreciate the aggregate values of all the properties of an ox. The parts of the ox by which it is judged, let it be remembered, are called "points."

Thus it may be seen that a person even totally ignorant of cattle may judge of some of the most apparent properties of an ox; but were a lean one placed before him, he would be quite at a loss what opinion to pass on its present, and far more of its future, condition. The outline

of its figure would to him appear rugged and angular, and consequently coarse. To him the body would feel as a number of hard bones, covered with a tough skin and coarse hair. A judge, on the other hand, could at once discover the good or the bad points of a lean, as well as of a fat ox, because the properties of the former are the same in kind, though not in degree as those of the latter; and, in accordance with the qualities of these points, he could anticipate the future condition of the lean ox, save and excepting the effects of accidents and disease.

But it may be asked, if the qualifications of a judge of cattle may be so easily acquired as is here represented, how is it that the opinion of a judge is always held in deference, and is always referred to in cases of difference of opinion?—This question admits of a very satisfactory answer: Errors in the judging of cattle arise not so frequently from not knowing the points to be judged of, as from judges attributing to one or more of their favorite points too great an influence over the future increasing condition of the ox; and as long as there are so many points to be considered, and as most of them may be partially altered by local circumstances, a difference of opinion may exist among judges of lean stock.

Now, what are those points of an ox, a thorough knowledge of which is so essential to constitute a perfect judge? Could they be described and illustrated with such precision as that, they might be applied at once to every ox, in whatever condition he might be, a great advancement would be made towards establishing fixed rules for the right judging of all the domestic animals. Fortunately, nature has herself furnished rules for ascertaining points for judgment, a knowledge of which can nevertheless be only acquired by careful observation and long and constant practice.

The first point to be ascertained in examining an ox is the purity of its breed, whatever that breed may be, which may be ascertained from several marks. The color or colors of the skin of a pure breed of cattle, whatever those colors are, are always definite. The color of the bald skin on the nose, and around the eyes, is always definite and without spots. This last is an essential point. When horns exist, they should be smooth, small, tapering, and sharp-pointed long or short, according to the breed, and of a light color throughout in some breeds, and tipped with black in others. The shape of the horn, however, is a less essential point than the color.

The second point to be ascertained in an ox is the form of its carcass. It is found that the nearer the section of the frame of a fat ox, taken longitudinally vertical, transversely vertical, and horizontally, approaches to the figure of a parallellogram, the greater quantity of flesh will it carry within the same measurement. That the carcass may fill up the parallellogram as well as its rounded form is capable of filling up a right angled figure, it should possess the following configuration: The back should be straight from the top of the shoulder to the tail. The buttocks and "twist" should be well filled out. The brisket should project to a line dropped from the middle of the neck. The belly should be straight longitudinally, and round laterally, and filled at the flanks. The ribs should be round, and should project horizontally and at right angles to the back. The 'hooks" should be wide and flat; and the rump, from the tail to the hooks should also be flat and well filled. The quarter from the aitch-bone, to the hook should be long. The loin bones should be long, broad and flat, and well-filled; but the space between the hooks and the short-ribs should be rather short, and well arched over with a thickness of beef between the hooks. A long hollow from the hooks to the short-ribs indicates a weak constitution, and an indifferent thriver. From the loin to the shoulder-blade should be nearly of one breadth, and thence it should taper a little to the front of the shoulder. The neck-vein should be filled forward, to complete the line from the neck to the brisket. The covering on the shoulder-blades should be as full out as the buttocks. The middle-ribs should be well filled, to complete the line from the shoulders to the buttocks, along the projection of the outside of the ribs. These constitute all the points which are essential to a fat ox, and which it is the business of the judge to know, and by which he must anticipate what the lean one, when fed, would realize. The remaining points are more applicable in judging of a lean than a fat ox.

The first of the points in judging of a lean ox is the nature of the bone. A round, thick bone indicates both a slow feeder, and an inferior description of flesh. A flat bone, when seen on a side view, and narrow, when viewed either from behind or before the animal, indicates the

opposite properties of a round bone. The whole bones in the carcass should bear a small proportion in bulk and weight to the flesh, the bones being only required as a support to the flesh.—The texture of the bone should be small grained and hard. The bones of the head should be fine and clean, and only covered with skin and muscle, and not with lumps of fat and flesh, which always give a heavy-headed dull appearance to an ox. The forearm and hock should also be clean and full of muscle, to endure travelling.—Large joints indicate bad feeders. The neck of an ox should be, contrary to that of the sheep, small from the back of the head to the middle of the neck. The reason of the difference in this respect, between the ox and the sheep is, that the state of the neck of the ox has no effect on the strength of the spine.

A full, clear, and prominent eye is another point to be considered! because it is a nice indication of good breeding. It is always attendant on fine bone. The expression of the eye is an excellent index of many properties in the ox. A dull, heavy eye, certainly indicates a slow feeder. A rolling eye, showing much white, is expressive of a restless, capricious disposition, which is incompatible with quiet feeding. A calm, complacent expression of the eye and face is strongly indicative of a sweet and patient disposition, and, of course, kindly feeding. The eye is frequently a faithful index to the state of health; a constantly dull one proves the probable existence of some internal lingering disease. The dullness of eye, arising from the effect of internal disease, is, however, quite different in character from a natural or constitutional phlegmatic dullness.

The state of the skin is the next point to be ascertained. The skin affords what is technically and emphatically called the "touch"—a criterion second to none in judging of the feeding properties of an ox. The touch may be good or bad, fine or harsh, or, as it is often termed, hard or mellow. A thick, firm skin, which is generally covered with a thick set hard, short hair, always touches hard, and indicates a bad feeder. A thin, meagre, papery skin, covered with thin silky hair, being the opposite of that just described, does not, however, afford a good touch. Such a skin is indicative of weakness of constitution, though of good feeding properties. A perfect touch will be found with a thick, loose skin, floating as it were, on a layer of soft fat, yielding to the least pressure, and springing back towards the fingers like a piece of soft, thick chamois leather, and covered with thick, glossy, soft hair. Such a collection of hair looks rich and beautiful, and seems warm and comfortable to the animal. It is not unlike a bed of fine soft moss, and hence such a skin is frequently styled "mossy." The sensation derived from feeling a fine touch is pleasurable, and even delightful, to an amateur of breeding. Along with it is generally associated a fine symmetrical form. A knowledge of touch can only be acquired by long practice, but, after it is once acquired, it is of itself a sufficient means of judging of the feeding qualities of the ox; because, when present, the properties of symmetrical form, fine bone, sweet disposition, and a purity of blood, are the general accompaniments. These are the essential points of judging lean cattle; but there are other and important considerations which must claim the attention of the judge, in forming a thorough judgment of the ox.

The proportion which the extremities bear to the body and to each other, is one of these considerations. The head of the ox should be small, and set on the neck as if it appeared to be easily carried by the animal. This consideration is of great importance in shewing cattle to advantage in the market. The face should be long from the eyes to the point of the nose. No face can be handsome without this feature. The skull should be broad across the eyes, and only contract a little above them, but should taper considerably below them to the nose. The muzzle should be fine and small, and the nostrils capacious. The crown of the head should be flat and strong, and the horns should protrude horizontally from both sides of it, though the direction of the growth from the middle to the tip varies the different breeds. The ears should not be large, but should stand a little erect, and be so thin as to appear translucent when exposed to the sun. The neck should be light, tapering from the front of the shoulder and neck vein, with a gradual rise from the top of the shoulder to the head. The length of the neck should be in proportion to the other parts of the animal; but this is a non-essential point, though an apparently short neck would be preferred to a long one, because it is generally well covered with the neck-vein. A droop of the neck, from the top of the shoulder to the head, indicates a weak-

ness of constitution, arising frequently from breeding too near akin. The legs below the knee should be rather short than long, and clean made. They should be placed where they apparently bear the weight of the body most easily and should stand wide asunder. The tail should be rather thick than otherwise, as thickness indicates a strong spine and a good weigher. It should be provided with a large tuft of long hair.

The position of the flesh on the carcass is another great consideration in judging of the ox, the flesh on the different parts being of various qualities. Those parts called the "spare-rib," "fore" and "middle ribs," "loins," and the rump or "hook-bone," are of the finest quality, and are generally used for roasts and steaks.—Consequently, the ox which carries the largest quantity of beef on these points is the most valuable. Flesh of a fine quality is actually of a finer texture in the fibre than coarse flesh. It actually contains fat in the tissue between the fibres. This arrangement of the fat and lean gives a richness and delicacy to the flesh. The other parts, though not all of the same quality, are used for salting and making soups, and do not command so high a price as the parts just described.

A full twist lining the division between the hams, called the "closing," with a thick layer of fat, a thick flank, and a full neck vein, are generally indicative of tallow in the interior of the carcass; but it frequently happens that all these symptoms of laying on internal fat fail. The disposition to lay on internal fat altogether depends on the nature of the individual constitution; for it is often observed that those animals which exhibit great fattening points on the exterior do not fill with internal fat so well as others which want these points. On the contrary, thin-made oxen, with flat ribs, and large bellies, very frequently produce large quantities of internal fat.

The first part which shows the fat in a feeding ox, is the point or top of the rump, which, in high-bred animals, is a prominent point; sometimes it protrudes too much, as the mass of fat laid on these is out of proportion to the lean, and therefore useless to the consumer. This is the part which frequently misleads inexperienced judges in the true fatness of the ox, because fat may be felt on this part when it is very deficient on most of the other points.

The parts on the other hand, which are generally the last in being covered with flesh, are the point of the shoulder joint, and the top of the shoulder. If these parts are, therefore, felt to be well covered, the other and better parts of the animal may be considered "ripe." Ripeness of condition, however, can only be rightly ascertained by handling, for there is a great difference between the apparent and real fatness of an ox. The flesh of an apparently fat ox to the eye, may, on being handled by a judge, feel loose and flabby; but a truly fat ox always feels "hard fat." With such, the butcher is seldom deceived, while loose handlers give no assurance of killing well.

It is proper, in judging of the weight of a fat ox, to view his gait while walking towards you, which, if he has been well fed, will be accompanied with a heavy rolling tread on the ground. In this way a judge can at once come very near to its weight.

The application of all these rules and considerations to the judging of lean stock, constitutes the chief difficulty to the judge. An ox in high condition, in so far as its condition, alone is under consideration, can be judged of as we have seen, by any one; and sometimes the fatness may be so great as obviously to deform the symmetry to any observer. The superiority of a judge to others, in these cases, consists in estimating the weight, observing the purity of the blood, and valuing the points of the animals. But in judging of a lean ox, its future condition and symmetry must be foreseen. These rules, if studied practically, will enable an inquiring observer to foresee these points; and, in judging between a valuable number of points, it should be remembered that purity of breeding will always insure aptitude to fatten, which in its turn will insure the largest remuneration for the food consumed.

D J. B.

Leaf Manure. If you have a large pile of leaves, which you would convert into manure adopt the following process:—Slack fresh lime with brine, till it falls to a powder. Turn the leaves with a fork, and sprinkle this powder evenly among them, at the rate of four bushels to a cord of leaves. Turn the heap now and then, and you will soon have a noble manure. Nothing is better, applied to fruit trees.

☞ Subscribe for the Cultivator.

Directions for Fattening Pigs.

Regular hours of feeding rank among the first of the rules which ought to be observed; the pigs will soon learn to expect their meals at certain times, and the stomach will be ready for it; irregularity will, therefore, irritate the digestive powers, and prevent so much benefit being derived from the meal when it does come.

Small meals, and many of them, are preferable to few and large ones, for swine are very apt to gorge and over-eat themselves, or if any be left in the trough, to return to it by fits and starts until it is all gone; in both cases the digestive functions are impaired, and the process is not fully and beneficially performed.—The best remedy for indigestion is to let the animals fast for four-and-twenty hours, and then to give them a small quantity of dry food, as barley or peas, whole or salted, and let them fast four or five hours more before resuming their usual food.

Pigs always eat more when first put up to fatten than they do afterwards; therefore, the most nutritious food should be reserved until they are getting pretty fat—and at that period the food must be varied, for the appetite being diminished, it becomes necessary to excite it by variety; and, besides, the same aliment constantly given pulls upon the stomach, and is incapable of supplying in itself all the various kinds of nutriment required by the increased and altered state of the body.

It will be found advantageous occasionally to mingle a little sulphur or powdered antimony with the food of swine put up to fatten; about half an ounce once in ten days will usually be sufficient. These medicines tend to purify the blood, facilitate digestion, and maintain the appetite.

An American writer states that he has found gall-nuts, bruised and mingled with charcoal, to act most beneficially on the health of swine while being fattened, and also recommends that they should always be allowed to root in the earth of a small yard attached to the sty each day, and, if they will, eat some of the earth, which will be good for them. An intelligent writer in the *Quarterly Journal of Agriculture* states, that on the Duke of Montrose's estate, the pigs have ashes and cinders given them occasionally to correct the acidity of the stomach; and that they are frequently turned out to a piece of ground sprinkled with lime, which they root in and eat; or else, if this is not possible on account of the weather, a little magnesia is now and then mingled in the milk. These simple precautions are always more or less necessary to animals that are highly fed, and have little or no exercise, and we should recommend them to the attention of all owners of pigs.

Cleanliness is another *sine qua non*. There is no idea so utterly without foundation as the common one, "that pigs love dirt," and that these animals thrive best in the midst of filth. We will quote one anecdote out of the many which have come to our knowledge, in refutation of this absurd opinion:—"A gentleman in Norfolk put up six pigs of almost exactly equal health, to fatten; treated them, with one exception, all exactly the same, and fed them on similar food, given in equal quantities to each, for seven weeks. Three of these pigs were left to shift for themselves so far as cleanliness went, and the other three were carefully curried, brushed, and washed. These latter consumed in the seven weeks less food by five bushels than the other three, and yet, when killed, weighed more by two stones four pounds on the average."

It should be the duty of some one person to keep the skins of the pigs put up to fatten—indeed, we would rather say, of all the pigs kept—perfectly free from mud, dust, or filth of any kind; and this will best be done by taking care that they always have clear water to bathe in within their reach, clean litter to lie upon, are occasionally combed and brushed, and that the sty is always kept free from filth, Nothing is so likely to engender lice and disease of the skin as for it to be suffered to remain in a dirty state. It is true that the maintenance of cleanliness will cost some trouble and expense, but every owner of pigs will best consult his own interest by attending to this point.

The best period for fattening pigs is autumn; then almost every kind of food is to be had in plenty, as well as in perfection; the weather is neither too hot nor too cold; and the humidity generally prevalent at this season acts beneficially upon the skin and tissues, and, as it were, lubricates the whole animal economy.—Besides, they are ready to be slaughtered at the period when this can be done with most advantange; when the lowness of the temperature allows more time, and consequently enables the

owner to turn the flesh to the greatest advantage; whereas, in hot weather the meat must be salted or pickled, eaten or disposed of immediately, or it turns off and is spoiled. In the immediate neighborhood of large towns alone will it be found advantageous to fatten pigs so as to have them ready to kill in the summer; there the prices which can often be obtained, may compensate the dealer for the difficulty and risk he undergoes; but even the facilities afforded by railways will hardly do this to those who reside in remote localities, as here the expense of the transit has to be added to the other items, and the risk is increased by close packing.

The best kinds of food for fattening pigs are:

Milk or whey mixed with barley, oats, corn or pea-meal, or with boiled and mashed potatoes.

Potatoes and rice; potatoes and meal of any of the above kinds, or mashed potatoes and whole grain.

Peas given whole, or crushed, or in the form of soup, and either alone or mixed with barley meal or potatoes.

Carrots and parsnips; and especially boiled carrots, which some persons consider to be the most nutritious and fattening food that can be given to swine.

Pasturage or clover, lucerne or sainfoin, or a run in the stubble of corn-fields immediately after the crop has been cut and got in.

Beet-root and ruta-baga are good; but should only be given when other roots cannot be easily obtained. And lastly, grain itself, as corn, barley, and oats, but not rye.

An American correspondent gives the following recipe for "an exceedingly nutritious food for hogs;" but it is one which circumstances will not often permit us to make use of:—"Boil Irish potatoes, pumpkins, and apples until they are soft; mash them all together, taking care thoroughly to mix and incorporate them, and add a little salt to the compound; swine will be found to relish this food highly, and thrive uncommonly well upon it."

A small portion of salt should always be mingled in whatever food is given, as it tends to stimulate the appetite as well as the digestive functions; and an ample supply of good water for drinking be kept within the reach of every animal.

Indian corn, buckwheat, rice, and maize, may doubtless be given with advantage, and are in themselves highly nutritious; but they cannot be reckoned as among the kinds of food generally in use, as, unless under particular circumstances, they are too expensive, and not always to be obtained at all.

Turnips, cabbage, lettuce, and beans, are not so much adapted for fattening as the kinds of food above enumerated, although these matters often form valuable additions to the keep of store pigs.—*Youatt on the Pig.*

Refuse Straw, &c. for Compost.

Mr. Editor:—When we commence the business of economising in one department, we are generally incited by the gratifying results which reward our efforts, to extend our experiments to other departments. This has been the case with me, and will, I have no doubt, be found to have been the case with every person who has succeeded, even tolerably, in the farming business. I had remarked that long straw, cornstalks, and meadow hay, when thrown into the compost heap, were very slow in decomposing, and that it appeared to retard, in no small degree, the decomposition of the ingredients. This I attributed to the loose, unconsolidated manner in which it necessarily remained for a long time after the materials were mixed and massed together; for, notwithstanding air is essential to the putrefactive process, yet it is so only to a limited extent; too large a supply acting very much the same as too large a supply of water, which has a preservative effect, even upon bodies naturally the most fermentable. I concluded that both straw and cornstalks—when used for this purpose—would be much sooner reduced, if cut into pieces so small as to admit of their being in some measure incorporated with the other stuff of the heap. This was done, and about half a ton of spoiled corn huts and refuse rye straw cut up and mixed with a quantity of other materials—muck, green weeds, forest mould, and about one cord of soil which had been taken from beneath a building where I was constructing a cistern. As I expected, the decomposition was much hastened by this process, and was perfected in a much shorter period of time even than I had anticipated. Without becoming too compact, the heap was sufficiently soiled to bring every piece of the cornstalks and rye straw in contact with the more moist constituents of the mass, while they served to keep open the pores, and insure the due filtration of water through the heap. B.

[*Germantown Telegraph.*

Labels for Fruit Trees.

Much of the confusion of nomenclature of fruits arises from the little precaution generally used to preserve the names. If, when a tree comes into bearing, the fruit is found to be particularly fine, persons at once desire to obtain grafts, and for want of a better name they attach that of the person from whom the grafts were obtained, although in most cases the fruit is well known to pomologists by another name. Nurserymen also frequently perpetrate errors in the same way. There are doubtless many fine seedlings with local names only; but in a large majority of cases these local names are given to old and well known fruit.—To guard against such errors and correct those already existing, will be the work of Horticultural Societies and individuals who are well acquainted with the common fruits of the country; but the greatest safeguard against the repetition of them in future is the careful marking of every young tree set out. Though, in addition to putting the names on the trees, we advise the further precaution of plotting out the ground of the orchard on paper, and marking the locality of each tree with its name.—This once carfully done, removes the possibility of errors.

The labels which come from the nursery on trees are not designed to be permanent, and they should be replaced with permanent ones at the first leisure after planting. Be particular that the wire by which the label is attached is not round the body of the young tree, otherwise it will, as the tree grows, be buried in it and materially injure the tree. The very best label we have ever used is a strip of thin sheet zinc, about four inches and three-fourths of an inch wide at one end, cut so as to taper to a point at the other end; which after writing the name of the tree, the date when set out, and when obtained, can be bent round one of the small branches, with the writing outside, and as the branch grows it will expand without injuring it.

The ink for writing on those labels is made thus: Take of verdigris and sal ammoniac each 2 drachms, lampblack 1 drachm, water 4 ounces, to be well mixed in a mortar, adding the water gradually. It must be kept in a glass stopped vial. Write on the zinc with the ink, after shaking it well, in a quill pen; and after it is dry you may expose it to the weather or bury it in the ground for years, and it will be as legible as when first written. —*Louisville Journal.*

From the New England Farmer.

Effects of Pumpkin Seeds on Cows.

Mr. Editor:—I noticed a statement in a late number of the *Farmer*, to the effect that pumpkin seeds dried up a cow's milk. This was something new to me, and contrary to the idea that I had always entertained, to wit, that pumpkins were valuable to feed to milch cows therefore I resolved to ascertain the real value of that statement before taking any stock therein. Being unsuccessful in raising a crop of pumpkins myself, the past season, I procured a few loads of one of my neighbors, who had a surplus, and commenced feeding them out to my cow, at the rate of half a bushel per day; she was then giving about eight quarts of milk per day, but instead of this increasing the quantity, they diminished it. I increased the feed to a bushel per day; still there was a decrease in the quantity of milk until the pumpkins froze up, when she did not give but four quarts per day. The cow did not fatten, and the reason for the decrease in the quantity of milk, I could in no way account for. When I stopped feeding the pumpkins, I gave a pailfull of slops from the house, with two quarts of oat meal per day, and in a short time, she was giving her former quantity; still I did not think of the pumpkins doing the mischief. When I read the statement in your paper, I had commenced feeding boiled to the cow, in addition to the slops and meal, with the same effect on the milk as in the fall. I then took out all the seeds before boiling, when, lo, the change!—Instead of five quarts of milk per day, I got nearly nine in a short time. I again kept in the seeds, with precisely the same result as before.

Now this experiment establishes a fact, which, (to me at least,) is of importance. Probably there are some who knew the same thing, years ago; and, perhaps, there are others, some that, like myself, were not *posted*, to whom this will be of consequence. I also noticed while I left out the seeds, that the cow made no extra quantity of urine, which all cattle invariably do, when fed on pumpkins, seed and all. If you see fit to give this an insertion, it may be of benefit to some who have had no more experience than myself. Yours, &c.,

J. B. FREEMAN.

Lebanon, N. H., 1856.

Gentleman Farming.

The following good remarks on "Gentleman Farming," as often understood, appear in the last number of the *Horticulturist*, from the pen of its correspondent "Jeffreys," well known to be an excellent and extensive, and very practical farmer, somewhere in this country, and who at the same time enjoys all the advantages of the country gentleman. They are in his own peculiar, rough-hewn, common-sense style:

Very pleasant to talk about—that is, to those who know nothing at all about farming, either "gentlemanly" or vulgarly. After exhausting "Lorain," read the "Sparrow-grass Papers." I have witnessed sundry editions of gentlemanly farming which didn't last a great while, and ending either in disgust, with a summary throwing up of the occupation, or toning down into a practical, positive reality, like any other business in which a man proposes to make an honest livelihood.

Wonderful ideas many people have of the profession of farming! A deal of poetry and imagination, into which are intermingled Sylphs and Dryads; Phyllises and Damons; shepherds' crooks, cottage girls, and country swains; innocent birds, bleating lambs, and various other romantic dreamings. But it is wonderful to find how soon these delectable images of agricultural bliss becomes spirited away on the trial. If a man has fifty thousand dollars well invested, on which he can draw punctual semi-annual dividends at six or eight per cent., then put himself and family on to a farm, well conditioned in all particulars, and children well-behaved, and not over extravagant in their notions, and, moreover, a *good ways out of town*, he may possibly, with a good deal of hard and vexatious labor, bring the year about at "gentleman farming." Otherwise, like the cobbler, he had "better stick to his last."

Why don't we hear of gentleman printers, gentleman merchants, gentleman doctors, gentleman editors, and gentleman everything else in the professional and business pursuits of life? Simply because every profession or calling in the world which amounts to anything, and by which men get their living, is followed in *earnest*, and those who engage in them lay their whole talents and labors into the work, whatever it be. The great, popular mistake of those who talk of *gentlemanly* farming is, that they suppose the *practical* farmer to be a boor, of necessity, and that his calling is a vulgar one, unfit for an educated mind; yet, when sublimated by intelligence, education and refined associations, *may* be made respectable! "Gentleman farming" is a rank humbug, as any other profession or trade would be, followed in the same fashion—that is, by hanging out a sign, furnishing the shop, store, office, or other establishment, with its stock in trade, library, or what not, and then leaving the students, clerks and shop-boys to take care of it, while the principal goes about the streets, talking politics, spending his day-light at the bar-room, sucking down brandy-smashes and mint-juleps, or fooling away his time in any other nonsense. That is the "gentleman" way of doing any sort of business, "farming" or otherwise. The upshot of the matter is, a man may be a gentleman in any calling which demands the exercise of brains, ingenuity and industry. I never yet knew a useful profession which demanded low intellect or clownish manners, as a qualification for its pursuit.—*Country Gentleman.*

The fall Season for Transplanting.

Nature has given us two seasons in which to transplant trees and shrubs for future growth, viz: the spring and fall. Of the two we prefer the spring, because, if we are a little ignorant or careless, Nature very kindly takes hold and gives us a little help during the summer; whereas, in the fall, if you are not very careful, the frosts, snows and ice, will not help the matter any.

Fall transplanting may commence as soon as the leaves cease their operation, or action on the system of the tree. If you are in a hurry, and all the leaves have not ceased their action, pinch them off. The winter is the night of vegetation. It then reposes in a quiet sleep, as if to gather strength for the next summer's (or day's) work. It is important, therefore, that you should place the tree, which you now set out, in as good and well protected condition as it was when you first took hold of it.

How is this? Why, all the roots were spread out in their respective directions and well covered with soil, which lay snug about them so as to keep them, not only in their place, but also to supply moisture to the rootlets whenever they should become aroused from their winter

torpor and begin to draw nourishment for the branches above.

Then again, as if to guard against the cold and upheaving influences of frost, a nice *blanket or coverlid* of leaves and other litter is generally placed over the roots on the surface of the ground for some distance from the trunk.

Here you have a hint of what a fall transplanted tree or shrub requires. This is what, at the present day, is called *mulching*. We should called it *blanketing*.

If you have never observed the operation of this mulching, you will be surprised to see how effectually a covering, even a slight one, of leaves or some litter of the kind, will ward off the upheaving of the frost and protect the roots during winter, and how it keps in the moisture during the heats of summer. These few hints may be of service to somebody.

The Selection and Care of Stock.

In the breeding of stock of whatever kind, there are two essential rules: 1st—*Get the right Stock.* 2d—*Take care of your Stock.*

The selection of animals for breeding is the cardinal point of the breeder's duty. On this—judicious or injudicious—all issues turn, and success or failure follows, as it is this way or that. Without judgment, without constant application, without great research into the true characteristics of *breeds*—and the formation of animals, nothing satisfactory can ever be arrived at. We consider *distinctiveness of character* the main link in the whole chain of breeding; for without this you have nothing to guide you. Then come the *touch* or the *handling*—this is very essential. The color among horses and short horn cattle, must be regarded as more a point of the exercise of taste, than as a quality which has an influence on the character of the breed. The color of Devonshires and Herfords, and of sheep, afford a correct guide for determining the purity of blood.

In the same breed there are always to be found families, having distinctive traits, or characteristics, which they transmit with more or less certainty and force to their progeny.—It appears to us, that breeders should seize upon these distinguishing qualities, and make them a clue to the accomplishing of distinctive purposes in breeding. In the breeding of fine animals in this country, has there not been too much indiscriminate intermingling of all manner of traits—of differing and opposing characteristics, and are not our different breeds of animals loosing these peculiar marks of *individuality* among their members by this procedure, to their permanent disadvantage?

It must eventually come to this—that every breeder will prosecute his business with a view to a certain object—to the establishing in a degree, as nearly perfect as possible, of certain valuable qualities in his animals. It may be speed, or draft, or both combined, in horses: it may be milk, beef, or work, in cattle; wool or mutton in sheep—and so forth,—and the individual animals possessing the requisite qualities in a superior degree, must all be drawn into these different channels. We say that *eventually* this will be done. In England this division among horses is perfect, and nearly so among sheep, but cattle are indiscriminately bred. If any one purpose prevails it is that of producing beef.

It evidently would be far more profitable, not only to individual breeders, but more advantageous to the country at large, if these different purposes were pursued separately by different breeders. A good milker is a chance production in our short horn herds, and we know of no quality which would give to a herd of Short Horns or Devons so much popularity as that of being uniformly good milkers. Milk has been sacrificed to the beef producing qualities. This fact may be every where observed. The eye is charmed with the round carcass, fullness of loin, depth of quarter and brisket, and fineness of head and neck. These traits are at a premium, but is it sound policy to press the development of one set of attributes to an extreme pitch, at the expense of others equally important and valuable?—But whatever may be the purpose of the breeder he should seek to reach and preserve a uniformity in his herd. It was this which gave Mr. Bates his reputation as a breeder. His Duchesses, noted for their uniform excellence, were bred in and in, "to the last degree he dared go," when he resorted to another herd, and found in Belvedere the good qualities he desired to perpetuate. This has been the course of all successful breeders of stock. No entire herd of Short Horns have realized such high prices, in modern times, as did Mr. Bates'—and it was owing to their uniformly fine quality.

After having obtained the right kind of animals to breed from, the next thing is *to take good care of them*,—for without this the best will deteriorate. *Good care*—may be summed up in a few words: Wholesome and sufficient food and drink, in regular quantities, at regular times, a uniform condition of flesh, good warm shelters, equable temperature and perfect health. Without these no one can succeed let his materials be what they may.

Theory of the Application of Stable or Yard Manure.

The letter of John Johnston of Geneva, recently quoted from the Genessee Farmer, (see Co. Gent. Vol. 8, p. 299,) has excited much interest, for it is of the utmost importance to know how to apply manure to the best advantage.—Mr. J anuonnces "that for the last twenty years he has acted in opposition to theorists in the application of barn yard manure, and has obtained most satisfactory crops. So far as opposition is concerned, Mr. J. is very likely right,; but it is certain that all remunerative practice must have a rational basis, and to signify this basis the word theory is legitimately employed. However Mr. J's practice is opposed to crude and imperfect theories, it cannot conflict with the true and complete Theory.

This true theory is the only key to a perfect practice; and to make our theories approach completeness is, then, a most desirable object.

A characteristic of good theory is breadth. It is not derived from a narrow observation' and is not a hasty stroke of fancy; but comes from large knowledge and careful reflection.—Every successful farmer like Mr. J., contributes by his operations and results, to the materials from which Theory is to be elaborated, and yet from no one farm, or kind of practice, can we learn in all their comprehensiveness, the great guiding truths of agriculture.

These remarks are suggested by the attitude so to be elaborated, and yet from no one form, or kind of practice, can we learn in all their comprehensiveness, the great guiding truths of agriculture.

These remarks are suggested by the attitude so often assumed by agricultural writers with regard to Theory. "We are not among the theorists"—"without fear of being called a theorist," are examples that have occured in comments on Mr. J.'s communication. It is a pity that so good a word as theory, which has the best reputation among the best philosophers, should be a scape-goat in agricultural literature. This will be mended as agriculture becomes more philosophical.

This much about theory in general. Now for the Theory of the application of manures. Suppose we spread manure on the surface of grass land in the fall, and let it lie through the winter—what will happen? If the manure contains or yields ammonia by decomposition, doubtless some of this substance may escape into the atmosphere and be lost. But in "well rotted manure" the fermentative process has passed its period of activity; the carbonaceous matters of the straw and dung have become humus-like, and decompose slowly, and the ammonia they contain is probably in such a form that its escape by exposure must be very slow. Any ammonia that may be evolved passes into an atmosphere filled with the blades of grass and without doubt is quite thoroughly economised by these living absorbers.

The soluble portions of the manure are washed into the soil, and if the latter contain only a few per cent of clay in its composition, there is little fear that any of these substances will be lost, or pass down below the reach of plants. The distance to which soluble matters may penetrate the soil under the action of rains, must depend on several circumstances, and principally on the retentiveness of the soil for soluble bodies, (the salts of the manure) and on the frequency and quantity of the rains. A pure sand has next to no retentive power; a pure clay has the greatest. Between these extremes they are numberless intermediate degrees of retentiveness. When a dilute solution of potash, ammonia and phosphoric acid, or what amounts to the same, putrid urine or sewer age water, is filtered through a layer of soil, the first portion of water that passes through is quite free from those bodies; they have have been in fact, retained by the soil. If the solution is continuously poured on after a certain amount of pure water has passed, the soil becomes, so to speak, saturated with the solid matters, and they appear again in the water that flows through. If, now, the soil thus charged with potash, &c., is treated with a sufficient quantity of pure water, these bodies are generally washed out again, and may be completely (?) removed.

When a heavy rain falls on the ground something quite similar takes place. The soluble surface matters, from manure or other

wise, are carried down into the soil, but are permanently retained within a certain distance from the surface, which distance is less as the quantity of rain is less, and the retentive power of the soil greater.

Now a very heavy rain wets down only a few inches, and accordingly we have very little reason to fear any considerable loss of soluble matters from the upper soil, if it be not too light in character, and if, being thorough drained or not naturally porous, the rains soak into it, and do not run off from the surface.

In the Spring then, we have our grass land that has been manured after Mr. Johnston's plan, ready to break up for corn; and if we compare its condition with similar unmanured land, we find the former has a much heavier sod than the other, as the effect of the fall manuring.* This sod is also charged with the soluble matters of the manure. If now we invert the sod by the plow, and put our seed-corn into it, it is obvious that the manure is just where it is wanted, viz—*distributed uniformly* through the upper stratum of the soil, and thus within reach of the roots of the young plant. Were the manure spread with a fork, i. e. in a very rough and imperfect manner, on the sod, and then immediately turned under to a depth of 5 or 6 inches, it could do the corn little good until its roots should strike down to that depth. Then they find the manure in one narrow layer, and may easily be injured by its rankness and strength. (?)

The superiority of the practice of planting on inverted sod, has long been fully recognized. The reason lies in the accumulation of plant-food as the surface of the soil, by the roots and leaves of the grass, and in the ready and regular delivery of these stores of food to the young plant by the decay of vegetable matter. It is highly probable that in the case under consideration, the soluble matters of the fall manuring, to a good degree, entered first into the grass, and then are by its decay yielded to the corn The grass itself is made more susceptible to decomposition by the increased rankness of growth in Autumn.

* I have recently learned from John T. Norton, Esq., of Farmington, Ct., that for many years he has practiced fall manuring grass land with the most decided benefit, the effects of the application being speedily perceptible in the greener color of the grass; while spring manuring produces little increase of yield the first year.

The practice of Mr. J. in applying manure (well rotted) to wheat just before it is sowed, and harrowing both in together, or top-dressing the field after the wheat is sown, is in accordance with good theory. The spring or fall rains to which the farmer looks to give the seed a start, and encouraging its early growth, in either case puts the manure where the young plant needs it.

In the Co. Gent. of Dec. 11, Dr. Meek, in his remarks on this subject, states that his experience and practice are the reverse of Mr. Johnstons. He recommends to plow under fresh manure just before planting corn. Mr. M, I infer, does not break up grass land for the corn crop. Mr. M. says—Let such manure, (good solid manure, full of rich juice and fresh,) be evenly spread and quickly plowed under, and I maintain, without any fear of being called a theorist, that it is a more economical way of applying manure than to let it lie so long on the top of the ground, 'wasting its sweetness on the desert air.'

Probably Mr. J's plan of using "well-rotted" manure is best; very likely too, Mr. M.'s way of applying fresh "manure full of rich juice," is also best. Whatever issue there may arise between the two methods, resolves itself into the question—Is it better to use fresh or well-rotted manure? Some remarks on this subject may follow. S. W. J.

The Improvement of Grass Land.

The following judicious, practical remarks on an important subject, we copy from the Gennesee Farmer:

In the improvement of grass lands, the first thing to be done is the removal of all stagnant water by means of thorough under draining. Unless this is accomplished, the best of cultivation, seeding and top-dressing, will fail to produce their full effect.

When our meadows fail, from whatever cause, it is generally advisable to plow them up in the fall, and cultivate them thoroughly for two or three years, with corn, potatoes, or other root crops, manuring them heavily, and seeding down again when the white daisy and other weeds have been destroyed, and the old turf has entirely disappeared. If, however, the land is so low that it is not desirable to cultivate it with other crops, it may be plowed up in August, and well worked with a cultiva-

tor, harrow, &c., till a fine, "seed bed" is obtained, not forgetting to give it a good coat of manure; if long manure, plow it in; if well decomposed, which is best, spread it on the furrows, harrow and cultivate till it is thoroughly incorporated with the soil. About the first of September, sow it with artificial grasses, and be not sparing of the seed; half a bushel of timothy, and half a bushel of red top, or other grasses in proportion is none too much. Generally, by so doing, a fair crop of good hay is obtained the next season. This method of restocking worn out meadows has been practiced with much success by many excellent farmers in New England. Some of them recommend sowing clover with the timothy and red-top, in the fall, but we should be inclined to fear it would seldom survive our hard winters; unless, indeed, it were sown quite early, say in July or first of August.

We have seen meadows greatly improved by simply scarrifying the sward in the fall by means of a heavy harrow, and then sowing from eight to sixteen quarts of timothy, red-top, and rye grass seeds, equal parts to the acre. In the case alluded to, heavy rain followed immediately after the sowing, and the seed was not harrowed in at all, but generally it would be well to cover them slightly with a light harrow. A good coat of compost, spread on the sward before the first harrowing would be of much benefit.

The best time to top-dress all meadows that are not of too light or porous a nature, is in the fall. In England nothing was more common, twenty years ago, than to make a compost with barn yard manure and old headlands, and after it was well decomposed, to cart it on to the meadows during the winter months. The effect was very beneficial. Unmixed manure was seldom used. Since the introduction of Peruvian Guano, however, the practice of composting old headlands has, to some extent, given way to top-dressing with light artificial manure. Guano gives a better immediate effect, at a much less cost; but whether it is ultimately more profitable, is an open question.—With hay at from fifteen to twenty dollars per ton, there can be no doubt that a judicious application of good Peruvian Guano, in the fall or very early in the Spring, will give sufficient increase, for a few years at least, to pay for the guano, and have a reasonable profit. The constant exportation of hay draws heavily on the soil for potash, and as guano contains very little potash, (not more than two per cent) it may reasonably be supposed that to mature with guano alone will soon leave the soil deficient of available potash. If such should be the case, an application of wood ashes would supply the deficiency.

PHILOSOPHY OF RAIN,—To understand the philosophy of this beautiful and often sublime phenomenon, so often witnessed since the creation of the world, and so essential to the very existence of plants and animals, a few facts derived from observation and a long train of experiments:

1.—Were the atmosphere everywhere, at all times of a uniform temperature, we should never have rain, or hail or snow. The water absorbed by it in evaporation from the sea and the earth's surface, would descend in an imperceptible vapor, or cease to be absorbed by the air when it was more fully saturated.

2.—The absorbing power of the atmosphere, and consequently its capacity to retain humidity as proportionately greater in warm than in cold air.

3.—The air near the surface of the earth is warmer than it is in the region of the clouds. The higher we ascend from the earth, the colder do we find the atmosphere. Hence the perpetual snow on very high mountains in the hottest climate.

Now, when from continued evaporation, the air is highly saturated with vapor, though it be invisible and the sky cloudless, its temperature is suddenly reduced by cold currents descending from above, or rushing from a higher to a cooler latitude, its capacity to retain moisture is diminished, clouds are formed and the result is rain. Air condenses as it cools, and like a sponge filled with water and compressed, pours out the water which its diminished capacity cannot hold. How singular, how simple, the philosophy of rain! What but Omniscience could have devised such an arrangement for watering the earth?—*New York Observer.*

MANURE.—Experiment shows that the same amount of manure which has been covered nine inches deep with earth, so that no evaporation can escape, will produce four bushels more wheat to the acre, than that which has lain exposed to the weather. Keeping manure covered, then, when wheat is a dollar and half a bushel, will add six dollars to the value of the products of every acre of land, growing wheat

The Best Cattle for Slaughtering.

The rearing of Cattle for the beef-market will certainly call into requisition a larger amount of scientific and experimental knowledge, when the consumers and venders of beef shall have made the discovery, more generally than at present, that the beef of certain breeds and still more, of certain modes of feeding, is greatly superior to that otherwise produced.—When a proper distinction of this shall be more generally made, there will be a call for superiorly fed animals, which will attract more attention and greater numbers to that department of agricultural skill and labor.

To those who are at present engaged in the raising of cattle for the market, or in the production of the best quality of beef, it may be both interesting and instructive to be informed as to the principles and practices of those who have been the longest employed in this department of business, and who have brought to bear pursuit all the resources or helps to be found in physiology, chemistry, the analysis of food, &c., together with the facts accumulated during a long experience. That the business of raring and feeding of animals for the production of beef and other kinds of meat has been pursued during a long series of years, and has received much more attention in Great Britain, than it has, as yet, in this country, will be at once acknowledged and admitted. From the best experience of those in that country, who are the most successful in this department of business, there are few in this country, we presume, but might gather many useful hints and items of information. We have, accordingly, been induced to select a few such hints and items from recently published essays and discussions, giving the results of the experience of those who have been most skillful and most successful, in the business referred to, on the other side of the Atlantic.

To obtain stock best fitted for feeding, or for the laying on of fat and flesh and early maturity, breeding by crossing distinct or allied breeds is much resorted to among British feeders. It is a fact, pretty generally known we presume, that a vigorous progeny is usually gained as the result of a cross of two distinct breeds. This fact or law is the foundation and explanation of the practice just named. Another result of the crossing of breeds is, that the offspring are generally precocious, with a tendency to an increase of size. To secure this result with the greatest degree of certainty, and to the utmost extent, it is the usual practice to select a male having the usual properties of early maturity, and the disposition to accumulate flesh and fat rapidly. Size is also a quality which is regarded; but ought to be always, deemed of less importance than a hereditary tendency to obesity, precosity, and superior quality of flesh. As the Short Horns possess these qualities in an eminent degree, this breed is almost invariably resorted to for a male for crossing females of other breeds.—Where the rearing of cattle is followed mainly with the view of obtaining stock for the production of beef, the practice in many districts is to use a pure bred male of the Short Horn breed, with a female of the breed peculiar to or prevalent in the particular district. This class of cattle is rapidly extending in most of the northern counties of England, where the breeding of cattle is practiced to any great extent. The dairies in London, also, are mostly supplied with cows so bred.

In both of these respects we might follow the practice of our British brethren, with good prospect of similar results. For here, as there, the Short Horn breed is peculiarly characterized by a tendency to early maturity and to a great accumulation of fat. This breed is also possessed of valuable qualities as dairy stock, though their lactative capacities have not been cultivated so much as their capacity for laying on fat and flesh.

Death of Black Hawk.—The telegraph on Tuesday morning, announced the death of Black Hawk, the progenitor of the celebrated race of horses that bears his name. He was the proverty of David Hill, of Bridgport, Vt., and died at his stables on Monday, December 1st. He was foaled in 1833; sired by Sherman Morgan, from a half-blood English mare. He was a little under 15 hands high, and weighed about ten hundred pounds. One of his chief excellencies was the uniformity with which he stampt his offspring with his own characteristics.

Roses for flowering, encourage freely; take up all layers in the open ground, and put in cuttings of any varieties wanted; transplanting may be done, if the season will permit, any time from now until the month of March.

From the New England Farmer.

Manuring in Hill.

The secret of success with the farmer, is to know how to procure and apply manure. On the fertile prairies of the Mississippi Valley, the planter need not trouble himself to supply food for his plants. But in England it is far otherwise. Without manure, nothing good can be effected. We may plow and sow, but cannot reap. Hence the importance of this subject, in all its bearings, to the cultivator.

Of *applying* manures, there are various modes. Farmer Oldschool says he wants the manure directly underneath the plant; therefore, in planting corn and potatoes, he "dungs in the hole."

The theory and practice of the new school goes against this mode. It advocates an equal distribution, over the whole surface, of all the nutriment intended for the crops.

We had supposed this question virtually settled; that all "book farmers," at last, admitted the correctness of the distribution theory. But we find it otherwise. In the Connecticut valley, many, and we believe a large majority of the farmers, will continue in the old practice, and these men are ready to give a reason for the faith that is in them.

1. Having but little manure, they must economise in the use of it. They cannot afford to spade it over the whole ground, they must manure for the crop, and not for the land.

2: The plant needs artificial stimulus in the early part of the season. By placing the manure in the hill, an impulse is given, which will last through the whole course.

Not being convinced by these considerations we will give our views of the matter. In the growth of the plant, the roots keep pace with the stalk, when the latter is mature, not an inch of ground, within a distance equal to the height of the stalk, will be void of roots or fibres, sent out in pursuit of nourishment from the plant. If there is nutriment within this range, it will be taken up and appropriated, and all the purposes of the plant served as well certainly, as if the whole were concentrated at a point, answering exactly to the nadir of the tassel.

When the seed first sends out its radicle, its fibres absorb moisture from the substances with which they come in contact. If it is a shovelful of manure, they will revel in that for a time. But soon these porous fibres, these rootless, become roots and take on a woody structure, which fits them to sustain the stalk with its burden.

These roots or this portion of the roots, no longer contain absorbent vessels; and moisture and nourishment must be obtained, if at all, from abroad. A Shanghai rooster would be somewhat discommoded by having his feed placed directly under his feet. Not less so would the plant be, which has not, like the fowl, the power of locomotion. Then to concentrate all the nutriment designed for the development of the plant about the roots, in its infancy, seems to me much like giving to a horse in the morning all the grain intended for the day. Better let it be administered as needed.

Manured in the hill, the plant is unduly stimulated, during the first of the season.—Consequently it lays out more work than it can perform. When rearing time comes, the strength of the plant is exhausted, or what is equivalent to it. The absorbents have wandered into a region, where there is no nutriment, consequently stalks are abundant, but ears are few. Furthermore, in manuring, regard should be had to the land, to the future crops. Manuring for the crops alone is ruinous policy, impoverishing alike to the soil and the tiller.

The teamster who administers stimulating drinks and a goad to his horse, may secure more labor for a few hours, but many days of rest and good feeding will be required to make good what he has lost.

On a piece of land that has recently come into my possession, which was in rye last season, and corn the year before, the place of the hill may be pointed out, as easily as if the corn were now standing. Where the hill were is grass, elsewhere none. Is that good farming? Much like the policy of him, who fed his pig one day, and fasted him the next because he liked a "streak of fat, and a streak of lean."

In the use of mineral fertilizers, it may be advisable, in some cases, to make application directly to the roots of the plants, but animal and vegetable manures, and all composts, think, should be distributed over the whole ground, and every farmer who once makes a fair trial of the spading process, will never again engage in "dunging in the hole" his corn any more than his fence posts. H.

Artificial Ice.—Mr. Merriam, in a letter to the New York Commercial Advertiser, thus speaks of tho process of making artificial ice, as carried on at the Cuyahoga Works in Cleveland, Ohio:

"This afternoon I have been engaged in examining a machine made here for producing intense cold by artificial means. The machine after having been worked an hour, brought down the mercury, in the thermometer to the line of 24 degrees below zero, which was the lowest degree marked on the scale. I cut an apple and placed it on the outside of one of the metal pipes in which a current of ether was made to pass through a vacuum, and in a few minutes it was frozen. This machine has been two years in being brought to its present state of great forwardness. It is worked by steam. It freezes water, forming blocks of ice twelve inches by six that being the size of the metal cells in which the refrigeration takes place.—Each cell is separated by what may be called a flue. A large number of these cells are placed in what may be called a square cistern, and of sufficient number to produce a ton of ice at one operation. Clothing of persons coming to quarantine in vessels can be frozen in this machine, and thus divested of the germs of pestilence. It can be made to frost the entire inside of a ship in a few hours, and thus purify its hold and its other apartments; and it is capable of reducing the temperature of stone warehouses so low as to free the goods stored in the refrigerated apartments from everything infected with yellow fever."

☞ Our readers are well aware that we have never advertised patent medicines—but we now publish an advertisement of Ayer's pills, not because we are paid for it alone, because we honestly believe that Dr. Ayer is one of the best Physicians and Chemists of the age, and because we know from experience that his Cherry Pectoral is the best medicine for a cough that was ever invented. We have been cured by it of a severe Bronchitis, and have given it to our family with unfailing success for Colds, Coughs, Whooping Cough, Croup, &c. Our neighbors who have tried these Pills represent them as an extraordinary good medicine.—*Democrat, McArthur, Vinton County, Ohio.*

☞ All wet lands should be rendered dry, by ditching and draining.

North Carolina Apples.

We received, several weeks since, an extensive and valuable collection of southern apples, from Westbrook and Mendenhall, of North Carolina, which we have examined as they have successfully ripened, and now furnish our readers with the following notes suggested by their examination, which we hope will be especially interesting to our southern and southwestern readers, who may wish to procure the best varieties adapted to their peculiar localities. The collection contained about fifty varieties handsomely grown, and furnishing a very favorable indication of the quality of the best southern varieties, the collection taken as a whole being quite equal, we think, to many collections of equal number, grown in the best northern apple districts. Our correspondents deserve much credit for so valuable and extensive a southern collection. A few of the early sorts had partly decayed when received, in consequence of the delay by misdirection to Macedon, but most of them were in excellent condition.

Northern Varieties.

Newark Pippin—resemble the same variety as grown west; larger than eastern specimens.

Yellow Bellflower—large, more regular in form than usually seen, but so much less compact and less acid, that its correctness was at first doubted, but it appeared on further examination to be genuine.

Baldwin—moderate in size, less marked with russet, and more dotted than northern specimens, but fully equal to them in flavor. Its different appearance externally would have prevented its being readily recognized.

Golden Russett, Bullock's Pippin—Large, fully equal in size to a fully grown Spitzenburgh, whole surface yellow, with no russet—flesh exceedingly tender and delicious, "best," almost as melting as a pear—evidently genuine, but not soon recognized by those who have only seen it north.

Esopus Spitzenburgh—light red, and skin with very large dots, wholly unlike northern specimens—but its flavor showed unmistakeably its genuineness.

Hay's Winter—nearly resemble specimens grown in New Jersey.

Roxbury or Boston Russet—less russetted

than Roxbury here, and fully mature in autumn—if correct, much modified, softer, but fully equal to Northern specimens in flavor.

Yellow Newtown Pippin—larger and more ribbed than the Newtown Pippin here—flavor excellent—appears to be an autumn or early winter apple.

Tewksbury Blush—twice the size of northern specimens, and ripe in Autumn.

English Russet—rich and good, fully equal to those grown in New York, and ripe late in Autumn.

Green Newtown Pippin—so much unlike Northern fruit—in form, texture, and flavor, that we question its correctness—more resembles the White Pippins of Ohio.

Rawles' Janet—flavor perhaps a little richer and better matured than that more north.

NATIVE OR SOUTHERN VARIETIES.

Some of these may possibly be northern sorts, but so modified by climate as not to be detected from seeing simple specimens without the trees. Their value will depend greatly on their bearing qualities, growth, &c., of which we are not informed.

Hockets Sweet—above medium, roundish oblate a dull rich yellow, with some red—of a very sweet and rather rich flavor. May prove valuable.

Davis' Fall—rather large, roundish, slightly oblong, striped light red; tender, sub-acid 'good."

Baltimore Red—very large, round-ovate, purplish red, with large whitish dots; tender, sub-acid, "good"—appears to be quite distinct from Elliott's "Baltimore."

Evan's Limbertwig—size medium, quite oblate, ribbed, greenish yellow with dull red; flesh nearly sweet, "good"—may be "very good" if fully matured; this appears to have been picked before full maturity. Quite distinct from Limbertwig of the South and West.

Golden Wylie—exactly resembling Tallman Sweeting in form and flavor, and only lacking the peculiar line from stem to Apex which usually marks that variety—still we think it must be Tallman Sweeting.

Hunge—large, roundish, somewhat irregular; light yellow, with a faint delicate blush; flesh fine grained, tender, sub-acid, "very good." Appears to be a fine apple.

Johnson's Favorite—medium, roundish, regular, mostly covered with dull red or dull yellow ground; flesh fine-grained, with a nearly sweet, "good," or "very good."

Romanite—"one of our best"—medium in size, roundish ovate, regular, pale greenish yellow, with a broad dull blush—flesh subacid, agreeable, "very good." Not the Carthouse or Gilpin, known as Romanite in some places.

Old Maiden's Blush of North Carolina—Medium in size of roundish ovate, slightly ribbed, handsomely striped with light red on a yellow skin—flesh rather crisp, solid, rich, mild, sub-acid, "very good."

Clark's Pearmain—Size medium; roundish skin yellow, somewhat rough and russetted, with light rich red in the sun; flesh yellowish white, with a good or very good sub-acid, aromatic flavor, something like that of English Golden Russett. This is a better apple than we supposed it to be, as grown in Virginia.

North Carolina Seedling—rather large, roundish, slightly oblate, light red and dull yellow, calyx in a very deep basin; flesh sub-acid with an agreeable, "very good" flavor.

Holland Pound—large, round, rich yellow; rather coarse and fibrous, barely "good"—basin around the calyx singularly wrinkled or puckered.

Hall—"best winter." Medium in size, roundish, a light dull red or greenish yellow skin; flesh mild sub-acid, "very good"—specimen a little wilted, may have been picked before fully mature, but evidently a fine apple.

Guilford—battlefield—great keeper Medium, roundish, greenish yellow, sub-acid, about like Rhode Island Greening in flavor and character—sound, and apparently likely to keep till Spring.

Carolina Favorite—"great keeper." Large, roundish, a little oblate, slightly ribbed, light yellow, with a broad, light brownish red blush—flesh (in this specimen, rather tough and dry, evidently immature,) sub-acid, probably "very good."

Royal Limbertwig or Sharp's Greening—Very large, roundish, nearly regular, yellow, with a few very indistinct red stripes—flesh tender, agreeable, sub-acid, "good," or "very good."

Winter Brook—Medium, roundish oblate, even and regular, color rich yellow, reddened towards the sun, basin deep, flesh yellowish white, rich sub-acid, at least "very good"—general character considerably like the Swaar, and not much inferior to it in flavor. A good keeper.—*Country Gentleman.*

THE CAROLINA CULTIVATOR.

RALEIGH, JANUARY, 1857.

State Agricultural Society.

The Executive Committee of the State Agricultural Society met in this City on the 4th instant. Mr. John C. Partridge, who, for the past year has been the Secretary of the Executive Committee, having removed from the State, sent in his resignation, and the office was filled by the appointment of Wm. D. Cooke, the Editor of the "Cultivator." In the removal of Mr. Partridge, the Society has lost a very efficient Secretary, and a very useful member. His loss will also be felt in this community. We wish him much happiness and prosperity in his new home. The Premium List for the next Fair will be prepared in March. The premiums offered for field crops were to have been awarded at this meeting of the Executive Committee, but no competitors appeared. Will not many of our farmers turn their attention to this subject in time for the next Fair, and make their calculations accordingly?

Exchanges.

We acknowledge for the present month, the timely arrival of Graham's, Godey's, Putnam's Arthurs and Peterson's Magazines for January. All these monthlies continue to display a vast amount of industry, and a refined taste in their preparation. Putnam would never prove an exception, but for an unwarrantable propensity to dabble in sectional politics. The Eclectic, for the same month, presents an attractive array of contents and admirable portraits of Dr. Chalmers and Alexander II.

To Fatten Horses.

Every horseman knows that a horse looks twenty per cent. better if fattened in a short time than if several months are employed in the process. I don't believe in loading a horse down with fat—they do better in medium condition. A horse, if not very thin, can be put in fine condition in three weeks. But a narrow-headed, yard necked, narrow breasted, light-quartered animal, if he has never been fat, will give you a two or three months' task: and he will look the better for all the flesh you may put on him.

To fatten a poor horse quickly is no easy task. It is to be done by a variety of the best feed, and with close attention in giving it. Many persons feed sufficiently liberal, and yet their horses are low in flesh, simply because of the careless and irregular manner in which it is given out. When I wish to fatten a poor horse, I put his stable in a neat and clean condition, and commence by giving him small feeds of corn and oats, (whichever he takes best,) every two hours, from the time of rising in the morning till I retire at night—say six or eight feeds a day—taking care so to feed that he will always eat with a relish, and be hungry for the next meal. At most times I suffer his feed to lay by him; if he leaves any I take it from him and let him stand till he asks for it. For the first ten days I am careful not to let him get quite all he will eat. There is no better way of getting a horse's appetite up to the fattening point than to feed very often on good clean feed. By paying strict attention for ten days, you will have him fairly under way; and this is the most difficult part of the task. If at any time he gets cloyed, so that he refuses to eat, let him stand till he gets hungry.

During this time his stable must be kept clean and comfortable. He should have but little hay, but as much pure soft water as he will drink three times a day. Salt all the time at his will. He must be curried thoroughly once every day. Few men curry a horse as it should be done. Take your currycomb in your hand and with it make a quick motion back and forth, pass all over your horse, getting to the skin, and removing the dirt therefrom; then pass all over more gently with comb and brush, replacing the hair, and finish with the naked hand—putting every hair to its place.

Never give medicine of any kind—you can succeed better without. If I wished to reduce a horse in flesh in the least possible time, I should bleed and physic. If you have the time to spare it will be better employed in scalding or grinding your grain, and feeding warm mashes &c. It appears that friend Munson has little faith in our no-doctoring advice. If he finds the oil to answer, I advise him to stick to it, for if he does nothing worse than to pour a pint of grease down a horse that has a touch of belly-ache, he will hardly lose any. I have known it employed for thirty years—it is like mush to a stone bruise—does neither good nor harm—*Prairie Farmer.*

The Effects of Underground Draining.

One of the most interesting statements we have ever met with on this subject, is the Report of a committee of the Bangor Horticultural Society, (Maine,) on a visit to the farm of B. F. Nourse, in Orrington. The following is a portion of the report, giving a descriptiou of the land after anp before draining:

"Although the season had been wet, yet the land was dry; the grass, grain, corn and trees were making a vigorous growth, being clothed with a richness of verdure which gave promise of abundant harvests. They all bore testimony to a careful, intelligent, scientific culture. Comparing this land with certain other portions of a similar character in the vicinity, which had not received the same treatment, the contrast was very perceptible. The one was light, porous, arable, and free from wator; the other hard, lumpy, cohesive or miry. The one had been drained the other drowned.

"With the exception of the two places, each of about two acres, the whole farm was wet and 'springy,' unfit for plowing or any other agricultural process until quite late in spring or early summer. Water is found everywhere quite near the surface. The deepest well on the premises, dug in the dry season of 1854, extends down only thirteen feet. Tho excess of water made it cold and rather discouraging for any crop except grass, and even this was too readily killed by the action of winte frost. The surface soil is underlaid throughout (except immediately on the ledge of rock) by an impervious subsoil or hard-pan of stiff clay, quite retentive of water.

"This main discharges the water at the road side, which has never ceased flowing from i during the coldest winter weather. The land was then plowed across the drains with six oxen and the largest plow obtainable, opening furrows twelve inches deep, in which followed a subsoil plow drawn by four oxen, cutting twelve inches deeper.

"Upon this piece of land the frost comes out some days earlier, is later in fall, and of less depth in winter than in contiguous land. The whole is dry enough for spading or plowing as soon as the frost is out in the spring, or within two hours after any heavy rain. During th drought of 1854, there was at all times sufficient dampness apparent on scraping the surface of the ground, (with the foot in passing) and a crop of beans was planted, grown and gathered therefrom, without as much rain as will usually fall in a shower of fifteen minutes duration, while vegetation on the next fields was parching for lack of moisture."

There is no doubt that the great success which attended these experiments, was owing to the deep drains, three and a half and four feet deep, and to the very thorough subsoiling which the land afterwards received. The cost was heavy —the first experiment being one dollar a rod— subsequently it was done considarably cheaper, although tile had to be brought from Albany, at a cost of about $25 per thousand delivered there. The Report goes on to state the results in this case:

"A field of one acre and two-fifths 'thoroughly-drained' in this way, forty feet apart, three and a half feet deep, required 105 rods, including main, and cost $67.50 per acre, completed. This field was plowed and subsoiled each about ten inches deep, and a hoed crop taken off last season. During the harvest rain no running or standing water could be seen on its surface. When your committee made its visit we were shown an acre of this field which had been manured and partly plowed for corn, when a protracted rain came. The seed being in soak and manure wasting, after the second day's rain it was resolved to prosecute the planting, and the plowing was finished, the land harrowed, furrowed, and planted in a drizzling rain, work easily and well. The corn all came up and has grown well; and still we did see many clouds or other appearances of wet weather working. Yet this was a clay loam, formerly as wet as the adjoining grass field upon which oxen and cart could not pass on the day of this planting without cutting through the turf and miring deeply. The nearest neighbor, a member of your committee, said, 'if he had planted that day it must have been from a raft!'"

The following experiment in placing the drains more remote from each other, to save expense, is well worthy of notice, although not to be recommended for imitation except in extreme cases:

"In 1855 provisions were so high that such labor as ditchers rendered could not be cheapened in cost per rod; but an experiment was tried on a field of three acres by laying tile

drains three and a half feet deep, four rods apart, leading into a stone main, all of them covered and filled as before. An acre required forty-five rods—average cost 90 cents per rod, or $15.50 per acre. More time is needed with wet and dry seasons to test the efficacy of drains so far apart.

"This field was plowed, but not subsoiled, last fall. It was in good working order in three days after the frost was out, two weeks earlier than the adjacent land was ready to plow. If not so thorough in laying the land dry, and giving it such an open, porous soil as is desirable, its evident benefit at so small a cost per acre, makes the experiment worthy of imitation.

"Appended are some statistics of the cost, as ascertained, in draining this farm. These, however, must vary with circumstances, such as convenience of material, presence or absence of rock in the cuts for drains, price of labor, &c. No allowance is made for the removal of the large stone piles that encumbered these fields with disagreeable frequency, though it might be reasonably estimated as worth one-fourth or one-third the cost of the drains to get rid of these unsightly objects, by burying them forever beneath reach of scythe, hoe, or even plow.

"Cost of stone drains:

MAINS.	*Per rod.*
Digging 4 feet deep, 2 feet wide at bottom,	44 cts.
Hauling stone for channel,	15
Laying same,	12
Hauling and picking small stones for filling,	12
Sods, boughs or moss,	05
Returning earth with scraper,	12
	$1 00

SMALL DRAINS.	
Digging 3½ feet deep, 20 inches at bottom,	37½ cts.
Hauling stone for channel,	12
Laying same,	10
Hauling and picking small stones for filling,	12
Sods, boughs or moss,	04
Returning earth with scraper,	10
	86 cts.

TILE—2 *inches calibre.*	
Digging 31 feet deep, 6 inches at bottom,	33 cts.
Tile,	33
Laying same,	04
Stone fitting,	10
Sods, &c.,	02
Refilling,	06
	88 cts.

"In conclusion we would represent that the concurrent testimony of all this country and in Europe, who have tried this system of draining, proves that the following benefits are obtained: It obviates the bad effects of drought, because the roots of plants and trees can descend more deeply for nutriment and moisture; by removing excess of water, it renders soils earlier in spring, and allows work to be done sooner after rains; it averts the effects of cold weather later in autumn; it prevents the heaving of grass and grain in winter, and the frost from penetrating so deeply; it enables us to deepen the surface soil; it accelerates the disintegration of the mineral matters in the soil, and improves its mechanical condition by promoting the finer comminution of the earthy particles; it hastens the decay of roots and other vegetable matter; it allows the fertilizing gases of the atmosphere and water from rains to percolate deeply and be deposited among the absorbent parts of the soil until the necessities of plants require them; it causes a more even distribution of nutritious matters among those parts of soil traversed by roots; by removing stagnant water it prevents the cooling process of evaporation, and the abstraction of heat; it contributes to the warmth of the lower portions of the soil; it prevents meadows from becoming impoverished; it causes the poisonous, excrementitious matter of plants to be carried out of the reach of the roots; it prevents the formation of acetic and other other organic acids, which favor the production of sorrel and other noxious weeds, and it makes the surface soil of heavy lands light, and free from incrustation."

GREAT IMPROVEMENT IN SOAP.—The wife of an American agriculturist has been experimenting in soaps, and finds that the addition of three quarters of a pound of borax to a pound of soap melted without boiling, makes a saving of one half in the cost of soap, and of three fourths the labor of washing, improving the whiteness of the fabrics; besides the usual caustic effect is thus removed and the hands are left with a peculiar soft and silky feeling, leaving nothing more to be desired by the most ambitious washerwoman.

A SMALL pocket telegraph apparatus has been invented, not larger than a tobacco box, which can be attached to the wire at any point along the line, and messages can thus be sent.

[*From the New England Farmer.*]

Draining with Tiles.

BY H. F. FRENCH.

Enough has been said, and written, and observed, to convince all enlightened farmers that a great proportion of the lands in New England which prove in the end most valuable, require to be first relieved of surplus water. This is true of all our low meadows, and a great deal of upland, especially springy hill-sides.

Thorough draining with tiles is, without doubt, the cheapest and best mode of doing this, and although I remarked in a recent article that we have not yet arrived at the luxury of using drain tiles, I find that our farmers are resolving that they will act in this, as in other matters, on the principle that what is worth doing, is worth doing well; and will not be satisfied till the best mode of draining is adopted.

To keep up with the spirit of the age, I have myself opened some hundred rods of drains on my farm, and procured tiles all the way from Albany to lay in them. This being my first attempt, I can only speak now from observation, and the information I have gathered from men and books, on the subject. As this subject must occupy the attention of our farmers more than any other, for many years to come, it being the next great step to be taken in the march of improvement on all our old farms, it will be deemed excusable to begin at the beginning in our discussion. Though milk be "for babes," it cannot injure full grown men to taste it occasionally. So let us first answer

WHAT ARE DRAIN TILES?

Drain tiles are made of clay, similar to brick clay, moulded by a machine into tubes, usually thirteen inches long, and burnt in a kiln or furnace, to be about as hard as what are called hard burnt bricks. They are of various forms and sizes. Some are round, with a sole or flat bottom, moulded with the tile, others are horse-shoe formed, open at the bottom, to be laid on the *hard* bottom of a ditch without a sole, or in *soft* places with a sole or flat bottom, of the same material with the tile. The size varies from 2 to 6 inches calibre, according to the quantity of water to be conveyed. It is a question of expedience, whether to use very large tiles, or to lay two or more courses of smaller size, side by side, when the flow of water is very great.

HOW ARE TILES LAID?

Trenches are opened to the requisite depth, as narrow as convenient for men to walk in. Green hands at ditching will declare they cannot trench three feet deep, without breaking the ground 2½ feet wide, but with proper tools, I have found no difficulty in going 4½ feet deep in a trench but two feet wide at top. The English books say that men who work by the rod, always open very narrow trenches. My tools are, first, a common shovel; next a common spade, and lastly, a long-handled spade, cut down at a machine shop with shears, to 3½ inches width at the point with a true taper from the heel, making a wedge-shaped spade. With this the ditch is finished, with just comfortable room to lay the tiles straight, and lay in a chip of brick or stone on each side, where a joint is too open. Then having laid the tiles end to end, with a true descent in the trench, commencing at the top, cover them first with something that will exclude sand, which I take to be the worst enemy to contend with. I use sheet tan as a convenient and very perfect strainer. The books say turf with the grass down is commonly used. Hay, straw, or pine or hemlock boughs are also used. Having thus covered the tiles, put into the trench next that part of the earth thrown out, which lets the water pass through most readily, as sand or gravel, or in a clay soil, the top soil. It is perhaps possible with pure clay puddled in, to stop water from getting into the tiles, and no person of common judgment would put pure wet clay immediately on to the tiles. Finally, fill the trenches and make all level, making allowance for what the earth over the drains may settle. The first question that is asked by a novice in the art of draining with tiles always is,

HOW DOES THE WATER GET INTO THE TILES?

The answer is, it gets in at the joints and through the pores of the burnt clay. Professor Mapes says, that if you cork up both ends of a common drain title, and put under water empty, it will fill by water passing through the pores in two minutes. A Scotchman with whom I recently conversed, who is familiar with the practical operations of tile draining, said that you might stop one end of a tile, and pour in a quart of water every day in the year, and it would, all go through. There need be no fear on this point. In any soil but pure clay, you cannot keep the water out of the tiles,

and it is very rarely that clay is found that cannot be thoroughly drained with them. This is no new business, and there is no need of any doubt about the facts as to the operation of tile draining.

Mr. Colman states that the Duke of Portland had completed on his immense estates seven thousand miles of drains; and that the Duke of Bedford had made two hundred miles of drains on his estates in one year! Tiles have been used extensively in parts of New York, and to some extent in New England, but if evidence of their utility is wanted, an experiment may be referred to, tried by a neighbor of mine in Exeter, a first rate farmer and most reliable man.

EXPERIMENT BY MR. WILLIAM CONNER OF EXETER, N. H.

Mr. Conner procured 4,000 drain tiles from Albany, most of them two inch, a few larger, and laid the greater part of them in 1855. His land is a hill-side, of easy descent, of a slatey soil, with a clay subsoil in part, in other parts sand and gravel. Under most of the drained land, he found a clay bottom at about three feet depth, upon which the water from the hill above flowed along, oozing out upon the surface, and standing, in wet seasons, in little pools, and producing grass so sour and coarse that cattle would not feed upon it, and it grew up, and was mowed in the pasture where cattle were kept, for bedding. Mr. Conner put in his drains across the slope, at three rods distance apart, nearly parallel, and sixty rods long, mostly in straight lines. He carried the bottoms on a regular descent, without regard to the surface, laying none less than three feet deep, and in some instances cutting to the depth of six or seven feet, and united the whole in one main drain.

He considered it important to cut through the upper strata into the clay, to cut off the flow of water from the high land. The general rule will be found to be different from this course in one particular. The best authorities advise, ordinarily, to cut the trenches up and down, and not across the hill-side. But the course adopted by Mr. Conner seems effectual for his purpose. His drained land has not been plowed, or changed in any way, except by the drains, but so great has been the effect in a single year, of removing the cold water, that the cattle have fed the ground closely, no water standing in the holes upon the surface, even a day after a heavy fall of rain.

Mr. Conner is well pleased with his experiment, and says that he would rather have the product of the land without manure for five years to come, than to have it, had $75 worth of manure to the acre been applied, without draining.

He has, for many years attempted to drain his fields with stone drains, and pointed out a field where more than a hundred rods of them had been laid ten years. They answered well for a time, but of late have in part failed, and the cold water begins to do its secret work upon the crops. Like most of our best farmers, he feels the want of drain tiles, at a reasonable price.

WHY ARE TILES BETTER THAN STONE OR WOOD?

We may answer briefly, they are better, because they are more durable than any other drain, being so far as ascertained, imperishable when properly laid. They are better, again because mice and other vermin cannot live in them, or destroy them, They are better, because they drain more evenly than anything else. The labor of excavating is much less than for other drains, as the trenches may be very narrow. Finally, if the tiles can be obtained at the fair price of manufacturing, say $12 per 1,000, they are cheaper in the first cost than stone laying on the farm, because they are so much more cheaply laid. There are no tile works in New England that I know of, except in one town in Massachusetts, and the cost of freight from there or from Albany, where some three millions a year are made, nearly doubles the cost to us in New Hampshire.

But let there be a demand and the supply will come. We have clay, and capital, and men, and can have tile works, whenever the farmers make known their wants. For one, I am determined to try the experiment of tile draining, though at too great a cost for profit, per acre, on my own farm. The whole subject requires discussion. The old fogies, if a cant Congressional term is allowable, of course will declare that this country does not require draining, and that if it did, stones are best; but the young farmers who have their living to get off of land that has been skinned, will work deeper than their fathers, and a few years will show a systematic course of thorough draining with tiles, on all good farms It was designed, in this article, to throw out a few practical hints only.

A full discussion of the proper depth, distance, course, size and construction of drains, would occupy our paper for months. This may suffice for the present.

Green vs Dry Wood.

At the present day, in this age of progress, when science and art are continually unfolding their hidden mysteries, and making the way of knowledge so plain that "he who runs may read;" when information of all kinds is scattered broadcast over the land, through the medium of the press and the public schools; when the principles of all kinds of business are plainly and clearly illustrated, and placed within the reach of every one who is disposed to avail himself of the facilities thus afforded, and especially when the principles of agriculture have been so thoroughly investigated, and its truths so firmly established "that the wayfaring man, though a fool, need not err therein;" it would seem strange that there should be found numerous individuals in almost every community who believe that it is better and cheaper for them to use green instead of dry wood for fuel. Yet it is no more strange than true, if we are to take their actions as an exposition of their belief; and the most surprising of it all is, that a large share of this class is found among the farmers.

It certainly would be expected, that if any class of people were always to be supplied with an abundance of dry wood at all times of the year, it certainly would be the farmer; for in most case the only expense is the cutting and drawing of it from the wood lot to the house, and this can be done in winter without interfering with the other business of the farm.

I believe that those who buy their wood, generally burn dry wood, thereby practically illustrating the principle that persons cannot afford to buy green wood to burn; and if it will not pay to buy it, on the same principle it will not pay to burn it in any case on the score of profit. But says the advocate of green wood, I do not think it best to use all green wood, but to use a part dry with the green. Very well. On the same principle, if a part dry wood is better than all green, all dry is better than part green; and the admission you make at once proves the fallacy of your arguments. Well says the other, I think that wood lasts longer to use a part green. I admit it does; and for the reason that the wood must be dry before it will burn, and it will probably last about as much longer as the time it takes to dry in the fire. Now the object of burning fuel is to produce heat, and that state in which it can be prepared to produce the most heat in a given time must be the most profitable. It has been clearly demonstrated, by carefully conducted experiments, that a much higher degree of heat can be produced from burning dry wood than from green.

If it is a fact that green wood is so much superior for fuel, it seems strange to me that the engineers on our steamboats and railroads, in our furnaces and factories, should never have found it out, and instead of using only the driest wood that can be obtained, they do not substitute green wood in the place of it. In these and all other establishments where large quantities of fuel are used, economy and profit are calculated in the closest manner, in the proportion of the fuel used, and the method invariably adopted by them is sufficient to explode the green wood theory, and establish the facts without a doubt. Every rational person knows very well that ice or water cannot be burned, and also the effect produced by putting them on the fire: and the person who should advocate the doctrine that a cheaper and hotter fire could be produced by putting ice or water in the fire every time it was replenished with fuel, or should soak his dry wood in water before burning it, would be called insane, and a fit occupant for a mad house; and yet the person who burns green or wet and frozen wood, and insists it makes a cheaper or hotter fire, does the same thing, only in another and modified way.

Among the reasons that may be given for not using green wood for fuel are—there is consider able loss of heat in burning it. By weighing the same quantities of green and dry wood, and observing the difference in the weights, it can readily be seen what amount of water is contained in a cord of green wood, as the difference in the weights will be the amount of water in the green wood. From experiments made in drying wood at 199 deg. of heat, it was estimated that in an average lot of green wood, about one-third of the weight is water. Now in burning this wood, all the water in it must be converted into steam, and dried out of the wood before it will burn: therefore a portion of the heat must go to raise this water to the boiling point, and this portion of the heat passes off in a latent state and is lost for all useful purposes.

Of these facts, as well as many others, I have been fully satisfied by trials at different times and places. One in particular convinced me of the unprofitableness of burning green wood.

One spring, in consequence of not having sufficient supply of dry wood, I was obliged to use a part green wood in making maple sugar. I boiled my sap in sheet iron pans set in an arch. During several days in which the experiment was tried, I used about two-thirds green, and one-third dry, yet with all my efforts I was unable to boil more than one-half as much sap in a day when I used green wood, as when I used all dry wood. The difference in this instance may have been more than it would be in many others, yet in all cases I think the balance will be largely in favor of dry wood.

There is a loss of time in fitting green wood to burn green, as it has to be made finer in order to make it burn better, and still further in tending the fire, as it has to be frequently stirred up, punched, and overhauled, to keep it burning, and prevent it going out.

There is a great loss of patience and good nature, by the use of green wood for fuel. This may not be the case with the men, but whoever knew a woman that would endure the trials incident to this practice, without fretting and scolding. And well she may, for it is enough to try the patience of Job. If there was ever a situation in which a woman would be justified in scolding, I think this is one. It is enough to sour the sweetest disposition and ruffle the smoothest temper that ever fell to the lot of gentle woman. On this subject I shall be an advocate of *woman's rights*—the right to coax, and even scold and fret, if it will be the means of reforming the men, and making them hereafter furnish their wives with an abundant supply of good dry wood for all domestic purposes.

In all my experience I never knew a woman who said that she preferred all, a part, or even any green wood in preference to dry, in doing any kind of work where a fire was needed. Neither did I ever see a man who after using good dry wood for a time; voluntarily substitute green wood in its place because he thought it a better practice. Many other reasons might be given for not using green wood for fuel, but I think that in many, and perhaps a majority of cases, the reason for continuing in its practice, might be summed up in one significant word—*shiftlessness*.

Country Gentleman.

In addition to the practice of burning green wood, too many in this western country have another of a kindred nature, but even worse, if possible. It is that of chopping it handful by handful, all through the season, as it is wanted for use. Husband, says the wife, (as the men start to their work of a bright summer morning,) we have not enough wood cut to last till noon. The man says, John go back and cut a few sticks of wood. John says, father, the axe is so dull that I cannot chop with it. William, go and help John grind the axe Without further dialogue, the man goes forth to the field without John and William for the next half hour, and perhaps the team standing still the while for want of them. The whole forenoon's work is delayed, and the day's work cut short—and all for a handful of green wood, perhaps the fiftieth of a cord, which might have been cut at the right time for one cent, but now costs perhaps a dollar. Still this is the economy of too many and too often. Such people may not realize that cutting wood in summer at odd snatches costs them from one to ten dollars per cord, besides all the vexation and unpleasantry connected with it. Every man who would be an economist, or in fact, who would not be downright wasteful, should not only have dry wood, but have it cut and put in order at the proper time. Who and how many have we hit in these remarks?—

Wisconsin Farmer.

The Chinese Sugar Cane.

UNITED STATES PATENT OFFICE,
December 10, 1856.

SIR,—This new plant seems to be destined to take an important position among our economical products. Its seeds were sent, some six years ago, from the north of China, by M. DE MONTIGNY, to the Geographical Society of Paris. From a cursory examination of a small field of it, growing at Verrieres, in France, in the autumn of 1854, Mr. D. J. BROWN, then on a mission from this office for collecting agricultual information and products, was led to infer, that, from the peculiarity of the climate in which it was growing, and its resemblance in appearance and habit in India corn, it would flourish in any region where that plant would thrive. From this source, he obtained some 200 pounds of the seed, which was distributed in small packages, by this office, among the members of Congress, with the view of experimenting with it in all parts of the Union, and thereby ascertaining its adaptation to our soil

and climate. In numerous instances, the results proved highly satisfactory, as it attained the height of 8 or 10 feet, as far north as St. Paul, in Minnesota, and matured its seeds at various points in Massachusetts, New York, Pennsylvania, Illinois, and other places further south.

The following year, while in France, on a similar mission as above, Mr. Browne obtained several bushels of the seed of this plant, grown from that reputed to have been brought from South Africa by Mr. Leonard Wray, of London, and which has since proved to be identical with that obtained by this office in 1854.

There appears to be a doubt among many in Europe as well as in this county, as the true botanical name of this plant. M. Louis Vilmorin, scientific cultivator, of Paris, provisionally gave it the name of *Holus saccharatus*, which had previously been applied to the common broom corn, if not to other species, or at least varieties, of some allied plant. He also conjectured that it might be the *Sorghum vulgare* (Andropogon sorghum of others), and thought that it might comprehend a variety of it, as well as *Andropogon cafra*, &c., of Kunth.

Mr. Wray — who has devoted much time and attention to the cultivation of this plant, with the view of extracting sugar from its juice, at Cape Natal and other places—states that, in the southeast part of Caffraria, there are at least fifteen varieties of it, some of them growing to a height of 12 or 15 feet, with stems as those of the sugar cane *Saccharum officinarum*).

M. Vilmorin, also, says that, in a collection of seeds sent to the Museum of Natural History at Paris, in 1840, by M. d'Abadie, there were thirty kinds of sorghum, among the growth of which he particularly recognized several plants having stems of a saccharine flavor.—Others are of the opinion, that the common broom corn (*Holcus saccharatus*), the chocolate or Indian corn (*Sorghum vulgare*), and the Chinese sugar cane (*Sorghum saccharatum*) [illegible] belong to the same species, but [illegible] caused by difference of soil [illegible] Prosirio [illegible] after the manner of [illegible] thousand other plants [illegible] The Chinese sugar cane, however, differs from the others, in containing a far larger proportion of juice, and consequently is more valuable for fodder and other economical uses.

In 1766, a plant analogous to the one in question, was experimented upon at Florence, in Italy, by Pietro Arduino, for sugar; yet it must have been of a different variety, as he describes its seeds as of a clear brown color, while those of the Chinese sugar cane are of a shining jet black, and in appearance identical with those of the Sorghum vulgare, of the old collections.

The Chinese sugar cane, when cultivated on ordinary land, in the United States, somewhat after the manner of broom corn, grows to a height of from 8 to 15 feet, while in Europe it does not attain much more than half of this altitude. Its stems are straight and smooth, often covered with a white bloom, or down, having leaves somewhat flexuous, falling over, and greatly resembling in appearance those of Indian corn, but more elegant in form. When cultivated in hills, containing eight or ten stalks each, it puts forth at its top a conicle of dense flowers, green at first, but changing into violet shades, and finally into dark purple, at maturity. In France, and the central and northern sections of the United States, it has thus far proved an annual; but from observations made by M. Vilmorin, as well as some experiments in our Southern States, it is conjectured that, from the vigor and fullness of the lower part of the stalks in autumn, by protecting them during the winter, they would produce new plants the following spring. It stands drought far better than Indian corn, and will resist the effects of considerable frost without injury, after the panicles appear, but not in its younger and more tender state. If suffered to remain in the field after the seeds have ripened and have been removed, where the season is sufficiently warm and long, new panicles will shoot out at the topmost joints, one or more to each stalk, and mature a second crop of seeds. The average yield of seed to each panicle is at least a gill.

Since its introduction into this country, the Chinese sugar cane has proved itself well adapted to our geographical range of Indian corn. It is of easy cultivation, being similar to that of maize or broom corn, but will prosper in a much poorer soil. It does not succeed so well however, when sown broadcast with the view

of producing fodder, as it will not grow to much more than one-half of its usual height. If planted in May, in the Middle States, or still earlier at the South, two crops of fodder can be grown in a season from the same roots—the first one in June or July, to be cut before the panicles appear, which would be green and succulent, like young Indian corn—and the other a month or two later, at the time, or before, the seed is fully matured. In the extreme Northern States, where the season is too short and cool for it to ripen in the open air, the cultivator will necessarily have to obtain his seed from regions futher south. If it were important for him to raise his own seed, he could start the plants under glass, in the spring, and remove them to the field or garden at about the period of planting Indian corn, after which they would fully mature. One quart of seeds are found to be sufficient for an acre. If the soil be indifferent or poor, they may be sown in rows or drills about three feet apart, with the plants from ten to twelve inches asunder; but if the soil be rich, they may be planted in hills, five or or more seeds in each, four or five feet apart in one direction, and three or four in the other. The plants may be worked or hoed twice in the course of the season, in a similar manner to Indian corn. Any suckers or superfluous shoots which may spring up, may be removed. The seed should be harvested before it aequires a dark or black hue. Should the plants lodge, or fall to the ground, by the excessive weight of the heads, during storms of wind or rain, before the seed matures, they may remain for weeks without injury.

In collecting the seed, a convenient method is to cut off the stalks about a foot below the panicles, tie them up in bunches of twenty-five, and suspend them in any secure, airy place, sheltered from rain. If intended solely for fodder, the first crop should be cut just before the panicles appear, and the second as soon as the seed arrives at the milky stage. It may be tied up in bundles, shocked and cured, like the tops or staks of Indian corn. If not intended for any other economical use, after the seed has been removed, and the weather be cool, and the average temperature of the day does not exceed 45 deg. or 50 deg. F., the stalks may be cut up close to the ground, tied in bundles, collected into shocks, or stowed in a mass in a succulent state, for fodder, in sheds or barns, where they will keep without injury, if desired, until spring. In this condition, however, the lower parts of the stalks will be found to be quite hard and woody, and will require to be chopped into small pieces for feeding.

Precaution.—Particular care should be observed not to cultivate this plant in the vicinity of Doura corn, as it hybridizes or mixes freely with those plants, which would render the seeds of the product unfit for sowing.

CHARLES MASON, *Commissoner.*

Table of Contents.

Artificial Ice, - - - - - - - - 335
Directions for Fattening Pigs, - - - - - 335
Death of Black Hawk, - - - - - - 333
Draining with Tiles, - - - - - - 340
Effect of Pumpkin Seed on Cows, - - - - 337
Gentleman Farming, - - - - - - 338
Great Improvement in Soap, - - - - 339
Green *vs.* Dry Wood, - - - - - - 342
Horned Cattle—The Points by which Live Cattle May be Judged, - - - - - - 332
Leaf Manure, - - - - - - - 344
Labels for Fruit Trees, - - - - - - 327
Manure, - - - - - - - - 332
Manuring in Hill, - - - - - - 331
Medical Notice, - - - - - - - 335
Philosophy of Rain, - - - - - - 332
Refuse Straw, &c., for Compost, - - - - 326
Roses, - - - - - - - - - 333
State Agricultural Society, - - - - 337
The Fall Season for Transplanting, - - - 328
The Selection and Care of Stock, - - - 329
Theory of the Application of Stable or Yard Manure, - - - - - - - - 330
The Improvement of Grass Land, - - - 331
The best Cattle for Slaughtering, - - - 333
The Effect of Underground Draining, - - 338
The Chinese Sugar Cane, - - - - - 343

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We particularly commend our sheet. Their department will be edited with the utmost care and no expense or labor spared to render the columns devoted to their especial benefit, unusually Brilliant, Attractive, Instructive and Ornamental.

THE FARMERS' AND PLANTERS

Corner will contain Practical Suggestions and Agricultural Hints, contributed and culled from sources the most reliable, and containing information which will prove to them in the course of a single year, of almost incalculable benefit.

The other departments of our paper will receive the attention they respectively demand, each being especially and carefully prepared to meet the varied tastes of the several classes of its readers Among those we may mention:

Original Stories and Poems, Editorial Rambling and Sketches, Spicy City News, Washington Gossip, New York Chit Chat, the Latest Parr Fashions, Practical Receipts for the Household and Toilet, "The Little Ones" Department, Gems from Prose and Poetry, Reader's Guide, Historical Sketches, Translations, &c, &c

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☞ All those sending us subscriptions from the British Provinces, must enclose in addition to the subscription price, 25 cents for each subscriber, as we are compelled to prepay the United States postage.

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AYER'S PILLS.

A new and singularly successful remedy for the cure of all Bilious diseases—Costiveness, Indigestion, Jaundice, Dropsy, Rheumatism, Fevers, Gout, Humors, Nervousness, Irritability, Inflammations, Headache, Pains in the Breast, Side, Back, and Limbs, Female Complaints, &c., &c. Indeed, very few are the diseases in which a Purgative Medicine is not more or less required, and much sickness and suffering might be prevented, if a harmless but effectual Cathartic were more freely used. No person can feel well while a costive habit of body prevails; besides it soon generates serious and often fatal diseases, which might have been avoided by the timely and judicious use of a good purgative. This is alike true of Colds, Feverish symptoms, and Bilious derangements. They all tend to become or produce the deep seated and formidable distempers which load the bearses all over the land. Hence a reliable family physic is of the first importance to the public health, and this Pill has been perfected with consummate skill to meet that demand. An extensive trial of its virtues by Physicians, Professors, and Patients, has shown results surpassing any thing hitherto known of any medicine. Cures have been effected beyond belief, were they not substantiated by persons of such exhalted position and characteras to forbid the suspicion of untruth.

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Robert C. Winthrop, Ex-Speaker of the House of Representatives.

Abbott Lawrence, Minister Plen. to England.

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Also, Dr. J. R. Chilton, Practical Chemist, of New York City, endorsed by

Hon. W. L. Marcy, Secretary of State

Wm. B. Astor, the richest man in America.

S Leland & Co., Propr's of the Metropolitan Hotel, and others.

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These Pills, the result of long investigation and study, are offered to the public as the best and most complete which the present state of medical science can afford. They are compounded not of the drugs themselves, but of the medicinal Virtues only of Vegetable remedies, extracted by chemical process in a state of purity, and combined together in such a manner as to insure the best results. This system of composition for medicines has been found in the Cherry Pectoral and Pills both, to produce a more efficient remedy than had hitherto been obtained by any process. The reason is perfectly obvious. While by the old mode of composition, every medicine is burdened with more or less of acrimonious and injurious qualities, by this each individual virtue only that is desired for the curative effect is present. All the inert and obnoxious qualities of each substance employed are left behind, the curative virtues only being retained. Hence it is self-evident the effects should prove as they have proved more purely remedial, and the Pills a surer, more powerful antidote to disease than any other medicine known to the world.

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It is no new untried article but one that has stood the test of a ten years' trial before the American people, and its reputation and sale is unrivaled by any similar preparations extant. The testimony in its favor given by the most prominent and well known Physicians and individuals in all parts of the country is immense, and a careful perusal of the Almanac published annually by the proprietor, and to be had gratis of any of his agents, cannot but satisfy the most skeptical that this remedy is really deserving the great celebrity it has obtained.

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TESTIMONY FROM N. CAROLINA.

ASTONISHING EFFECTS FROM THE GERMAN BITTERS.

Certificate of Dr W SMITH, of Pine Hill, Richmond Co., N. C., March 4, 1854

Dr. C M. Jackson, Philadelphia.—Dear Sir.—I have been a subject of Dyspepsia in its worst form, for the last five years. Such was my condition for 12 months that the physicians and all who saw me said I must die. While in this condition, I was carried to the watering places in Virginia, Tennessee and North Carolina, but was not benefitted by any water to which I was taken. While on my way home, I stopped a week at Rutherfordton, a small village in N. Carolina to try the effect of some Chalybeate water in that place. About the last of the week, I went into a drug store to get some medicine for my child and myself. There were several of the village physicians in the store, and one of them seemed to take some interest in my case, and after asking me some questions, said he had been a dyspeptic, and had been greatly benefitted by the use of "Dr. Hoofland's German Bitters," prepared by you, and he insisted that I should try the bitters. He also called the next day at my room, and insisted so much that I would try them, that I asked him to get me one bottle. He did it, and I commenced taking it as directed, and I do say I was more benefitted by it than all the water and medicine I had ever taken.

After reaching home, one of my neighbors came to me for a prescription and medicine, (he a dyspeptic,) and I gave him nearly all the Bitters I had left; which effected much good in his case. He has often called on me for more of the same kind of medicine, saying he was more benefitted by it than any other he had taken, but I have not been able to get any more for him or myself since; will you, therefore, please ship me a dozen or more as soon as possible.

Respectfully yours,
W. SMITH, M. D.

GREAT CURE OF PILES.

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February, 1856. tf

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Straw Cutters of all the most approved kinds, varying in price from 5 to 50 dollars a piece; Corn Shellers, from 7 to 60 dollars a piece; among which may be found Readings celebrated Sheller, capable of shelling and fanning at same operation 2000 bushels corn per day Also, the vertical cylinder, double and single iron and wooden spout shellers.

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Loaf, Crushed, Granulated and Powdered Sugars.
Laguira, Rio and Old Government Java Coffee.
Orleans and West India Molasses.
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German, Cast and Shear Steel.
Broad Plough Iron, 6 to 12 inch.
American, English and Russia Sheet Iron.
Oval, half Oval and half round Iron.
Nail Rods, American and Swedes.
Band, Scroll and Hoop Iron.
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Horse and Mule Shoe Iron.
Tin Plate, Pig and Bar Tin.
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McCormick's and Palmer Mould Boards.

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For license to sell, with further information, address

W. E. WYCHE.
Brookville, Granville Co. N. C.

June 16, 1856. 5—tf

J. H. Gooch, Oxford, N. C., solicits orders for the above plows.

WE HAVE IN PRESS, and shall publish August 16, the Confidential Correspondence of the Emperor Napoleon, and the Empress Josephine including letters from the time of their marriage, until the death of Josephine; and also, several private letters from the Emperor to his brother Joseph, and other important personages. With numerous illustrative notes and anecdotes. By JOHN S. C. ABBOTT, author of "Life of Napoleon," &c., &c. One vol. 12mo. Price, $1.25.

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PATENT SWINGLETREE.

THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached to it. It is a cheap, safe, and certain protection against danger. It can be attached to old or new vehicles.

☞ Notice is hereby given, that any infringement on this Patent, or any immitation, or attempt to make or use by any modification, this Patent Swingletree in any of the counties above enumerated, the person or persons so offending will be prosecuted to the full extent of the law, in the U. S. Courts at Washington.

P. P. WILLIAMS & CO.

Raleigh, Feb. 14, 1856.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. COOKE, Raleigh, N.C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

EXECUTIVE OFFICE,
Raleigh, Jan. 26, 1856.

MR. WILLIAM D. COOKE has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

DEAR SIR:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
January 26th, 1856. WILL: A. GRAHAM.
WM. D. COOKE, ESQ.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to WILLIAM D. COOKE, Raleigh, N. C,

Raleigh, March 29, 1856.

Report of Professors Emmons and Mitchell, to the North Carolina State Ag. Soc., on

COOKE'S NEW MAP OF NORTH CAROLINA.

I have had frequent opportunities of testing the correctness of Mr Cooke's new Map of North Carolina, and parts of the adjoining States. This Map is worthy of special notice: 1st, from the fact that it embraces those parts of Virginia, South Carolina and Tennessee which are of immediate interest to the citizens of this State. 2d, that the eastern part of the State is compiled from data obtained through the determinations of the Coast Survey. 3d, it contains an entirely new feature in its *profile* extending along the line of the Railroad survey from Goldsboro' to Asheville, which exhibits the heights of many interesting points, as well through the central and western parts of the State lying east of the mountains as amongst the Mountains themselves.

In addition to the foregoing it may be justly said that Mr Cooke has taken unwearied pains to correct the geography of the different counties, and to insert the prevalent names of places, those for instance which have come into use since new lines of travel have been established. It is in fact a New Map, and the only map which can be relied upon for accuracy in its details. It moreover merits commendation for the artistical skill displayed in its execution, its typography being beautiful and distinct.

EBENEZER EMMONS, State Geologist.

In the encomium passed by Prof. Emmons, upon Mr. Cooke's new Map, I fully concur. The particulars mentioned by him are of first rate importance and interest. Most of the maps of the State, heretofore published, have furnished few, if any, indications of the position of any point within our own limits, with regard to the States, north, south, or west of us. This evil has now a remedy. In noticing the map, the very efficient and important aid, in its construction, so fully afforded by Prof. A. D. Bache, Superintendent of the United States Coast Survey, and by Col. Gwynn, having the management of the Survey of a railroad, carried over the Blue Ridge into the valley of the French Broad, should not be passed in silence Only the portion of the map representing the eastern part of the State has been submitted to my inspection, but to this I presume, the rest will be made to correspond.

E. MITCHELL.
University of N. C., October 21, 1856.

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Henry C. Watson.

7—tf.

September, 1856.

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Devoted to Agriculture, Horticulture, and the Mechanic Arts.

WILLIAM D. COOKE, Editor, and Publisher.

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For the Cultivator.

Prize Essay.

PREPARED FOR THE NORTH CAROLINA STATE AGRICULTURAL SOCIETY.

The accumulation, preparation and application of Stock-yard and Stable manure.

The location of the Stock-yard is in itself a matter of prime importance; the main points are that it should be situated as nearly as possible centrally in regard to the rest of the farm, so as to be equally convenient to all quarters and be rather at the top than the bottom of a slope, so that the heaviest loads should always go down hill. It is an excellent plan to have it made dishing towards the centre to prevent washing from rains which would otherwise carry off all the most valuable portions of the manure, at any rate a ditch should be dug round it to catch the fluids that escape; this being filled with leaves, &c. and cleared out at proper intervals will yield annually a large amount of manure. The stable should have plank floors inclining to the rear, so that they may be speedily relieved of all fluid matters; these, being constantly covered with leaves, saw dust, and other abundants, should be cleaned every day or two and the contents removed to the heap. The animals will thus have the advantage of clean dry bedding, and will be much freer from those annoyances which attack the inmates of filthy stables. Ammonia, a very subtle fluid, but one of great importance to the farmer, is generated in large quantities in all stables; it is injurious to the horse's eyes, and makes their coats rough and straying; if permitted thus to escape, its loss can never be compensated; it should therefore be fixed in the heap by the application of charcoal, plaster, or other absorbents; a selection of copperas in water neutralizes it completely and retaines it for beneficial uses. The best location for a stable would be against the side of a hill; if then it were furnished with floors of open slat work, all the droppings could be easily transferred to the cellar beneath, and thence loaded into waggons, standing just below.

The floors of the stables and all the yards should be kept constantly covered with leaves, straw, shucks, and other vegetable matters, and the stock be thus well employed in converting them into manure; the farmer would find it much to his advantage to employ all his

spare hands in hauling up materials for this purpose: leaf from old woods, the scrapings of ditches, dry pond mud, and other matters of this nature are valuable manures in themselves, and become particularly so when well trampled down and saturated with virtues of the manure. As far as possible all the straw, stalks, shucks &c., raised on the farm, instead of being sold off should be employed in feeding stock, to be thus converted, directly or indirectly, into manure. These, refuse matters, though they be, have drawn from the earth the various salts, neccessary to their own growth and the production of the crop; consequently it is a most suicidal policy to draw away the life blood of the farm, by selling or throwing away the very substances neccessary for the sustentation of our wheat and oats. So well are these matters understood in England, that in some of the best farming counties, special clauses are inserted in the leases prohibiting the tenants from selling the straw or using it in any other way, than for manure, and it it is considered good policy, there even, to buy stock and fatten them during the winter for sale in the spring; their manure alone in many instances paying all expenses.

The question naturally arrises here as to the relative advantages of plowing in the stubble as it stands in the fields, or carrying it home, turning it into manure, and hauling it back to the field. In a great measure the question revolves itself into one of time, the practical farmer may be induced by expediency or economy to adopt a course under certain circumstances, which he would decidedly object to under different ones. When dry vegetable matter is plowed in, in a dry state, it decomposes slowly, and produces a less effect on the succeeding crop; if fermented in the stock yard or stable, a certain unavoidable loss of organic, and a large loss of saline matter takes place.—It is therefore generally, theoretically true of dry, as of green vegetable matters, that they add most to the soil if plowed in without any previous preparation. The thrifty farmer yet should consider the advantages of the early and complete clearing of his ground, by the removal of the stubble, the more effectual destruction of insects and their eggs and the immediate and powerful effect well pulverized and fermented manure has on the next succeeding crop, instead of the slow and prolonged action as in the former case. In some instances the distance to and from the stock yard would exercise a control over his decision. See Brown's field Book.

The accumulation of manure in the stock yard pre-supposes and requires that the farmer should find it profitable to keep a large number of stock, and also the possession of large quantities of cheap provender; for if it be not profitable to keep and feed them, he certainly will not do so and then he must make shift to do without manure, but this is indispensable. The first of these requisites, then, will be found in breeding improved stock, and there cannot be a better basis than our hardy natives; it is probable that on this foundation a breed might be produced combining the advantages of both, and admirably adapted to the wants of our farmers. They would certainly find a smaller number of blooded cattle, in every respect much more profitable, than the herds of half-wild specimens, which pick up a precarious subsistance in our woods. But these require good care and feeding, especially during winter, and for this end the farmers should devote more of their land to the cultivation of roots and green crops, as a means of subsistence, both for themselves and their cattle. Indian corn should be more extensively sown to be cut green and cured for fodder, thus realizing an immense product, clover, collards and other succulant plants deriving much of their food from the air are valuable for forage, and very beneficial also in a rotation of crops. Accurate experiments would probably demonstrate that the most economical method of harvesting corn would be to, cut the stalk at maturity, and put stalks, blades, and ears, into shocks to await a convenient season for their disposal; the ground would thus be entirely cleared by one operation and a large amount of forage produced for the stock yard. An addition, both important in itself and useful in its future results, could be made by cutting down all the tall growing weeds on the farm at the period of their full bloom and throwing them in the stock yard; should there be danger from the vitality of the seeds they may be composted in the heap with lime and salt, which will prevent all probability of their germination.

The chemical constituents of corn, wheat, oats and other vegetables, are to some extent identical with those of their respective stems or stalks, as the case may be; thus the ashes

of the corn stalk contain precisely the materials necessary to build up that stalk and produce the grain; the same is true of the grape, the apple, the oak. Hence it is evident that the manures formed from stalks, shucks, straw, leaves, &c., together with that produced by animals, which have fed on the grains themselves, must necessarily be that which is best adapted to those crops, and well conducted experiments, with manures carefully prepared, and well preserved, would fully demonstrate the fact.

An analysis is here presented, showing how nearly identical in composition are the ashes and the grain of different plants, and of course the same constituents exist, whether the material is in the form of ashes or manure:

Ashes of Straw and Stalks of

Contain	Sugar Cane.	Rope.	Barley.	Oats.	Wheat.	Rye.	Corn.
Potash,	25	16	3 4	15	0.6	1.2	10
Soda,	—	11	0.9	—	0 8	0.4	35
Lime,	9	16	10 5	2.6	6.8	6.4	.70
Magnesia,	3	3	1 4	0.4	0.9	0.4	.27
Silica.	45	2	73.5	80	81	82	14

Ashes of Grain of

Contain	Barley.	Oates.	Wheat.	Rye.	Corn.	Bean.	Potato.
Potash,	2	1	2	5		4	40
Soda,	2	1	2.40	—		8	23
Lime,	1	.86	1	1.22		1	3
Magnesia,	1	.67	.90	1.78		1.58	3
Silica.	11	19	4	1.64		1.26	.84

In concluding this portion of the subject, it may be mentioned as a wonderful illustration of the simplicity of nature's most abstruse mysteries and of the wonderful adaptation of the means to the end, which the Creator exhibits in all his works, that our own bodies consist in great portion of these very substances, which we have unconsciously taken in with our food.

The preparation of stock yard and stable manures, since they consist essentially of the same materials, can conveniently be considered under one head; they are both composed primarily of the solid and liquid voidings in the one instance, of the horse or mule, and in the other, of those of cattle, mixed with a variable proportion of straw and fodder, of various kinds, and more or less advanced in decay. The difference between the horse, the ass, and the mule, is so slight, that all the main points of their organization may be regarded as the same, and of course their manure is very similar in character. Stable manure, then, varies a good deal, according as the animals feed on fresh succulent grass in the pasture, or on dry hay and nutritious grain, in the stable. It is hotter in its nature than that of the stock yard, heats sooner, throwing off much ammonia, not only because it contains less water, but also because it is richer in those organic compounds of which nitrogen (which, with hydrogen, forms ammonia) is a part. Even when fed on the same food, horse manure is richer than that of the cow, because of the larger proportion of the food of the latter which is discharged in the greater quantity of urine it voids. Bousingeault, a famous French chemist, has made analysis of the substances under discussion and it may be here remarked that he is excellent authority for all that pertains to agricultural economy, as follows:

	HORSE MANURE.		COW MANURE.	
	Dry.	*Wet.*	*Dry.*	*Wet.*
Carbon - - -	38.6	9.19	39.0	5.39
Hydrogen - -	5.0	1.20	4.7	0.64
Oxygen - - -	36.4	8.66	35.5	4.81
Nitrogen - - -	2.7	4.13	2.6	0.36
Salts and Earth -	17.3	4.13	17.4	2.36
Water - - -	—	76.17	—	86.44

By this account it appears that fresh manures of both sorts contain over 2 per cent. of nitrogen, but when fermented in exposed situations, they often lose the larger quantity of this most valuable ingredient, being then but little better than trash, whereas, when fresh and pure, they are worth nearly one-fourth more than any other farm manure. Fat cattle make better manure than any others, because it contains more phosphates; in lean animals, these salts are consumed in nourishing the bones; and in milch cows, they go to form the milk. Stock yard manure ferments more slowly than the other, and does not give off so much unsavory odor: this arises from the smaller quantity of nitrogenous substances and from the fact of their food being less perfectly masticated than that of the horse. Manures from both sources should be heaped up under

cover as soon as possible; the cold and wet manure from the yard being mixed and tempered with the hotter and drier manure of the stable; the softer nature of cow manure renders it more apt to be intimately commingled with the straw of the yard, but it undergoes such serious losses, both of quality and quantity, that the farmer who follows this plan frequently sacrifices all hopes of a crop. The heaps should be made up with large proportions of vegetable matters, light soil, charcoal or saw dust; lime, plaster, or charcoal, should be sprinkled plentifully on the heaps to absorb the valuable gases as they escape; but lime should never be placed in direct contact with the dung, nor be used *in* the heap at all, unless it contains a very large proportion of vegetable matter. Soap suds and the slops and washings from the house and kitchen should be poured plentifully over these heaps and the drainings from them be carefully preserved; they may be poured back on the heaps or used as manure, after being largely diluted with water. The heaps should be protected as much as possible from the direct influence of the sun, wind, and rain; all of which exert powerful agencies in carrying off the most valuable portions of the heap; a certain proportion of moisture, however, is necessary properly to promote decomposition, while a large amount of water entirely prevents it. If kept too dry the manure is apt to turn white and burn; in this situation it is termed "fire-fanged," and is useless; the proper medium can readily be attained by judicious care and attention: the heaps should often be examined and opened; if too hot, they may be stirred up, watered, and made over; if too cold, fresh manure may be added, and nicely covered over. The drainings from the heaps, and indeed from the whole yard, should be conducted into a covered water-proof receptacle; they are invaluable, holding in solution the most valuable portions of the manure; a pump might be so placed as to throw these drainings over the heaps again, to percolate through, or as before suggested, they may directly be applied to the crops. The main points to be attended to are, the promotion of putrefaction or decomposition, in order to change the nitrogen into ammonia; prevent the escape of the volatile parts into the air, and the washing away of the fertilising salts by rains and suows; having done this, the farmer may rest assured that his heaps are duly prepared for application.

The small thread-like fibres spreading in every direction from the larger roots are the organs by which the many substances which make up the plant and its product are extracted from the earth, carried into the general system of circulation and embodied in the plant. Hence it is clearly seen how some of the soda, lime, potash, &c., is introduced into the plant, and the corn and wheat containing these substances, it is evidently of prime importance that the plants be amply supplied with those matters which alone can satisfy their needs. These spungioles act precisely as the lacteals do in the human stomach: here the food, being well chewed, is acted on by the gastric juice and the bile, and converted into chyle, a thin white liquid, which is then rapidly drank up by the lacteals, whose thousand mouths are distributed all over the surface of the stomach. In the other case, the manure being well plowed in and distributed, is acted on by the rains and dews, and its virtues, held in solution, are eagerly sought after by the rootlets running in every direction in search of food. It has been well said that these roots possess an instinct which teaches them to hunt, like a dog does for a bone, and many interesting instances are adduced in support of this proposition, as the branches turn themselves and struggle towards the light; so the roots do towards the manure.

For wheat or other grain sown broadcast, the manure, being perfectly prepared, should also be sown broadcast, as evenly as possible; the proportion being governed by the condition of the soil, and the quantity of manure on hand; the manure being then nicely harrowed in, and the ground levelled or rolled, if possible; the preparation is complete. This is perhaps the only feasible plan of applying stock yard and stable manure for small grain, and offers many advantages; for the manure not being so close to the grain as to burn it, is yet near enough to yield the nourishment the young shoot requires as soon as the rains and dews have started the germination of the one and rendered soluble the virtues of the other. For corn, potatoes, or cotton, this plan is the correct one, if there be plenty of manure on hand; otherwise the farmer must content him-

self with giving each hill its proportion, or burying his manure in the seed furrow. Some farmers place it all along the water furrow, midway between the rows; the objection to this is, that the roots have to travel too far, and they are always in danger of being broken off by the subsequent cultivation. Much has been said about the proper depth at which manure ought to be placed, so that the crops may extract the greatest amount of benefit from it; both sides have had able and earnest advocates and either extreme has been defended with all the vigor and eloquence so grave a subject demands. To judge properly among so many conflicting opinions requires nice discrimination and accurate perception of the circumstances attending each particular case; it is probable that the careful farmer would find in each field something to qualify the plan he has successfully acted on elsewhere. The season being dry or wet would have great influence on whichever plan he might adopt, and if he could only determine this point beforehand, there would be no very great difficulty in deciding which of the two to choose. In a dry season the young fibres making their way through the parched earth would perish before they could reach the deep manure; if near the surface, its virtues would be exhausted before the plants needed them; in a rainy season on the other hand, whether deep or shallow, it would be very seriously affected by the rains, carrying away or burying too deep the precious substance. The safe general rule will always be to plough deep and break the earth finely; the manure being then placed at the same depth, the rootlets will find no hindrance in rapidly appropriating to themselves its benefits, while it will be equally defended from the washing of the rains, or the too great heat of the sun.

A question has been raised and earnestly argued on several occasions as to whether manure acted upwards or downwards; the matter may be readily settled on reference to the principles already laid down: in a dry season the earth is constantly kept open and porous; capillary attraction acting to a great extent, bringing up moisture, and with it the virtues of the manure, if any be there, to supply the loss occasioned by the extensive evaporation and restore the equilibrium; whereas, in a wet season, the contrary takes place, the excess of water sinking into the ground and carrying with it the manure. It is probable that, in this last case, the valuable parts of the manure are filtered out of the water before it has reached any very great depth, and are there stirred up to meet the future demands of our crops. It has been ascertained by direct experiment, that earth is an excellent filter; the foulest water of the stock yard dripping clear and sweet through a moderate size flower pot of earth.

One other question of great importance now remains to be considered, that is, whether manure should be applied in its long or short state, unfermented and largely mixed with long straw, &c., or well fermented and disintegrated into an undistinguished mass. In either case it should have been carted out early on the land and placed in heaps, at convenient distances, throughout the field, care being still taken to defend these heaps from the sun and rain, by covering them with earth, straw, leaves, &c. The best time to do this is after the earth shall have been sufficiently frozen to bear a heavily loaded cart; for the deep ruts remaining all winter filled with snow, might cause serious damage to the land. This question of the weight of the different sorts of manure, compared with their respective values, is well entitled to have its consideration with farmers; the long manure being of course much the lighter of the two.

The decision then as to the condition of the manure must depend on circumstances; if the object be to furnish the greatest amount of organic matter to the soil, the sooner the manure is applied after it is made the better, but for crops which grow and mature in a short time, well fermented manure is preferable. On compact clays the mixture of straw and coarse manure is beneficial, as making them looser and lighter, while the products of decomposition are more completely attained than in a light and loose sandy soil; these manures render loose soils more loose, and in them lose more of their elements in decomposition; therefore, in these latter soils, compact, well fermented manures are requisite. On account of its slow fermentation cow manure acts slowly on the soil; this arises from the smaller quantity of nitrogenous substances contained in it, and from the food being less perfectly masticated than that of the horse. Some farmers

think that it requires a long preparation to fit it for application, but the best opinion seems to be that it rapidly grows worse after being a year old, and after several years becomes valueless; but the practice of plowing it in fresh and hot is unskilful and injurious—producing smut in the places overstimulated, and leaving others entirely bare; since it is impossible to spread or cover it evenly. To sum up what has been said then: if the object be to promote only the next immediate crop, the manure should be completely rotted; but if subsequent crops be considered, or the soil be of a nature to be benefited by the fermentation and heat of fresh dung, long manure should be applied and immediately plowed in and covered. The use of long straw, leaves, grass, &c., on naked fallows, is much to be recommended; the ground is shaded and the salts brought up from the depths are rapidly formed by evaporation beneath the covering; on a small scale this operation is performed with much success around the roots of delicate trees and plants, and is called annealing; in these instances a moderate supply of water is beneficial; the litter prevents its being too rapidly absorbed and keeps the soil moist beneath its shade. The straw being plowed in acts mechanically, keeping the ground loose and open; the air contained in the intervals, and imprisoned as it were, becomes decomposed, the oxygen uniting with the vegetable matter, whilst the nitrogen or ammonia contributes to the growth of the plants. This explanation, if it be correct, of the effect of imprisoned air, may account for the benefits arising from the growth of those plants, such as peas, turnips, potatoes, &c., which, by the construction of their stems and leaves, overshadow the ground, and thus, in fact, make their own living. Long manure is always preferable for potatoes of both species, for that which is completely rotten makes them watery and worm eaten, and that the straw acts mechanically rather than contributes any part of its own substance, is proved by the fact that most often, when the potatoes are dug, the straw is found undecomposed and nearly in its original state.

All the heads of this essay have now been discussed in their order; it is eminently fitting that "Accumulation" should be placed first; for, without this, the farmer may almost as well throw away his tools; as a general rule he will find, at least in this State, that the "accumulation" of manure will pay him better than clearing new grounds or moving to new States; all his leisure hours and spare hands, summer and winter, should be employed in hauling and raking up materials for use, in this manner; thus not only making his fields and premises much clearer, but gathering an inexhaustible stock. The next point, the "preparation," also needs great care, otherwise the farmer would lose his labor; the valuable accumulations, as fast as made, should be duly secured, like money in bank, for his manure heaps are certainly the most trustworthy banks for the farmer. Then, having successfully gone so far, let the manure be faithfully applied, the seed plentifully sown, the soil deeply cultivated, and he certainly may confidently expect an abundant blessing on his labor.

Raleigh, N. C., Oct., 13, 1856.

Management f Fairs.

In our seventh volume we published several essays in relation to the true policy and proper management of fairs. We have not since had occasion to change our opinion in reference to the questions there discussed, nor do we believe that many years will pass before a portion at least of those suggestions will be adopted by all our agricultural societies.—There are other points that are by no means of secondary importance, in respect to which a change seems almost indispensable.

Suppose an exhibition is to be held for three or four days. It consists of cattle, swine, horses, sheep, etc. The entries are very numerous. The animals are choice. But how much time is it desirable to consume in viewing this collection? How long could even an enthusiast content himself in gazing upon them? Perhaps half a day would be ample time for such an examination, and would even allow the taking of memoranda sufficient for an extended report in some newspaper. But give a whole day to this. You have then used up just one-fourth of the time. What shall each or all do the other three fourths? Who will answer for us this question?

Practice, recent practice says, gaze upon a horse-race. Very well; how long can we occupy ourselves profitably in this manner?—

Scarcely three days, we think. But there are three days unprovided for, and how can they be advantageously employed?

Go home before the show is concluded, some one may reply. But though good advice under supposable circumstances, it is not consistent, perhaps, with the plan or wishes of the managers, who would prefer to retain the whole company, if possible, to the close of the fair.

Shall we give our own views on this point? We will do so, but beg leave, first, to ask, What is the one great object of the show? The answer is not doubtful. It is to improve the condition of agriculture in all its departments—to deepen and to extend an interest in, and a knowledge of this great branch of industry. This design, though single in its ultimate aim, consists of several parts, and in its accomplishment, the manager of a fair must know, and properly appreciate the importance of these details.

One important part of the education to be given at such exhibitions is to show to the community what can be done. Some make too low an estimate of this feature of a show, and some too high. This lesson concerns not cattle alone, but ought to embrace all departments of agricultural labor. It is quite as important to know when and how lands can be improved, or better varieties of seed secured, as to know the best breeds of cattle. Nor can this more extensive view of the subject be well overlooked. It is of the very first importance. Some suppose that by scientific treatment, every acre of land can be made to bear the largest amount of crops—its hundred bushels of corn, its sixty bushels of wheat, and so on. Others believe that their land already produces crops that pay better than larger ones. Both are equally mistaken, and on a fundamental point. What are our societies doing to enlighten the public on these matters?

Another branch of this education is, to teach the appropriate modes of treating different soils, so as to bring them to the best condition. This may be treated theoretically, and by actual experiments. But how far do our State and national societies attempt to do either of these? The only effort in this way, as we understand it, consists in a statement, by a limited number claiming premiums, of their mode of cultivation.

Another department of education has relation to breeds of cattle, the treatment best for each, the possibilities of each, and their peculiar distinguishing points of merit, whether, if cows, as milkers, or for butter and for cheese; if oxen, their powers of endurance, the feed they require, and the quality of their beef, etc. But we need not complete the list which we have but just begun. It might be extended indefinitely.

Now we beg leave to ask, in how many of these feasible ways are any efforts made in securing the one great end? It seems to us that almost the whole labor required in preparing for these shows is wasted. We have hundreds and thousands of well-informed farmers, and practised in writing on these subjects. Why not bring them out on such occasions, not in idle theorizing or oratorical displays, but in the detail of experiments; in describing actual processes, not for securing a single large crop, but processes by which lands have been permanently improved and ordinary crops made remunerative?

The successful treatment of clayey soils, of cold soils, of gravelly soils, etc.; the daily treatment of cattle, of swine, or of fowls; the manner of planting and the products secured under the processes adopted—these and many other topics, assigned at the previous annual show, or early in the year, and made the constant topic of study and of care through the year, the details and their results being carefully written, may be read to all desirous of knowing. By opening these subjects to a general discussion, the practices and the results of all present may then be obtained, and so far as they differ from the written essay, these differences may be discussed on the spot and by the press; for these verbal statements being taken down by a skillful reporter, may be made part of the record, and the whole, in the form of an abstract, be given to every member of the Society, and to the public at the actual cost of printing them. How rapidly four days would pass away if thus devoted. How short the time compared with the end aimed at. Here is at least work enough for the visitors of an annual show.—*Plough, Loom and Anvil.*

☞ Clay is frequently sought for by horses and eaten with avidity, and, it is belived, with decided benefit to their health.

Experiments with the Chinese Sugar Millet.

Messrs. Editors—Knowing that you take a deep interest in anything which promises to be valuable for our country, I send you the result of an experiment which I made with the Chinese Sugar Millet—*Sorghum Saccharatum.*

Having received from the Patent Office a paper of the seed, I planted it as a matter of curiosity, though not having the least confidence that it would prove to be worth anything. The seeds and stalks so nearly resembled our common broom corn as to make me feel quite sure that they were these.

I planted it in hills, about 2½ feet apart, with 6 to 10 seeds in a hill. It was greatly neglected during its growth, from an impression of its worthlessness.

Some time in August there was a chance frost which nearly terminated its growth, and, in fact, completely destroyed some sweet corn growing in the same garden. The millet was just putting forth its seed stalk, and the seed was, consequently, all destroyed. The stalks, however, were left standing until some time in October, when—still supposing them to be worthless—I had them cut and thrown into piles, to get them out of the way.

After they had lain upon the ground for some time, I took a handful of the stalks and gave them to my horse, who ate them greedily, eating both leaves and stalks.

About this time I saw a statement in the papers that some person had made some molasses from this plant. This led me to make the following experiment with mine, although I had reason to suppose that the frost and the exposure on the ground would have destroyed any good qualities which it might have originally possessed.

I took some of the canes and cut them into pieces about three inches long, when they were readily ground through one of Hickok's Portable Cider Mills, with cast-iron grinders, and then pressed with the powerful pressers attached to the mill. The quantity ground was about half a bushel of the pieces, and the juice expressed was about seven quarts. This juice, when evaporated, made one quart of molasses, that is pronounced, by those who have tasted of it, to be superior to the New Orleans molasses, and some say, equal to the flavor of the maple syrup. It is, at all events, good molasses.

From an estimate made, I judged that the square rod of ground planted—if the canes had all been used—would have produced four gallons of molasses, or at the rate of 640 gallons per acre. Such a crop would have proved valuable the last year, since sugar and molasses are so high.

There is little doubt in my mind that any person who has a small piece of land may manufacture his own molasses, and, perhaps, sugar.

If cultivated on so small a scale as not to warrant the expense of erecting the rollers for expressing the juice from the cane, they may be cut up in a straw cutter, and ground in one of Hickok's portable cider mills, with such facilities that two men could obtain five or six barrels of the juice per day by hand, and proportionally more if horse or other power is used. This juice could be cheaply boiled in one of the evaporators with which you are acquainted without burning the syrup or wasting any fuel.

Besides, the molasses obtained from the stalks, the leaves will make good forage, the seed will nearly equal that of a crop of corn or oats, and the tops will make brooms.

With all of these advantages, may not the sugar millet prove of great value to the community? Every family in the country can make their own sugar and molasses, while, at the same time, the seed, forage, and brush for making brooms, will pay all of the expenses of raising the crop.

Those having seed to spare, will do well to make it public, that more experiments may be made during the next summer.

H. G. Bulkley.

Kalamazoo, Mich., 1857.

[The experiments of our correspondent are certainly valuable facts, not only to our farmers, but our whole people. We hope that fair and full experiments will be made with this millet during the next season, and now is the time for farmers to prepare and lay out their work.—*Scientific American.*

Fattening Ducks.—Ducklings intended for the table should be confined in a warm house, never to be allowed to swim, and have an unlimited supply of food. A mixture of three

parts of Indian corn meal and one part potatoes, moistened slightly with the washings of dishes, the liquor in which meat has been boiled, or milk, with a few unground grains of barley once daily, fattens them quickly.

The Norway Rat.

The Norway rat, better known as the wharf rat, from its favorite locality, is not indigenous to our soil; but was introduced from Europe, which received it from Asia, in the eighteenth century, as late as the year 1750. There are few parts of the world now visited by navigators, where this animal has not been introduced; and the immediate consequence of its introduction has been, that all the native rats have been destroyed, or obliged to withdraw beyond the reach of this subtle and implacable enemy.

Prior to 1750, this rat was almost if not wholly unknown in Europe. It was conveyed to England, about the year named above, in the timber ships from Norway, whence its name. Many years subsequently, it was brought to this country in European ships, and has been gradually propagated from the seaports, inland, wherever the facilities for transportation invited them.

It is amazingly prolific, bringing forth from twelve to eighteen at a birth, and its period of gestation is but five and a half weeks. It is said by one author to bring forth three times a year; but we do not think he could have been a naturalist, or that he knew whereof he affirmed.

Arguing from the innate rascality of the animal, and knowing that the propagation of his species is the worst thing he could be guilty of, we cannot believe that their breeding seasons are limitrd to three, or that they have any police regulations whatever, upon that matter. A pair of them will stock a village in a marvellously short space of time.

The black rat is found only in inland situations, whither the Norway emigrant has not had time to penetrate. It resembles the brown rat in manners and habits, and is almost as destructive. It is a matter of dispute among naturalists, whether this species is a native of America, or was introduced here by the Spaniards, in the first settlement of the country.

[Selected.

From the Prairie Farmer.

Shade Trees.

Availing myself of the invitation contained in a late number of your paper for communications from your readers upon various subjects therein named, and, among others, in relation to the locust as a shade or an ornamental tree, I propose making some remarks in regard to it, trusting that if these remarks shall prove of no value in any other respect, that they may be the means of calling the attention of some of your many readers to the subject, and thus bring forth in that way the experience of other and, I trust, abler writers thereto.

From the great abundance of locust trees in proportion to other shade trees that we meet in traveling in the Northern States, it may well be presumed that this tree, as an ornamental or shade tree, is a general favorite. In some, if not all the Southern States, a tree somewhat resembling the locust, but called the *China tree*, carries with it the preponderance of the popular suffrages.

If we were to inquire what causes have contributed to make the locust so popular with the masses, it might be found that its supposed rapid growth, and the ease and certainty with which it is propagated, and is made to survive transplanting, are the main ones. Although it cannot be questioned but that it is a tree that is easily propagated, and that it will survive transplanting, with almost the same certainty as Canada thistles, yet facts warrant the conclusion that it is not as fast a grower as the maple. Within sight of the window at which I now write are two yards, in which both maple, hickory and locust were planted more than ten years ago; and of the three kinds, the maple has made the largest and best growth, and the hickory of course the slowest. I have noticed the same fact in all cases where trees have been set out any great number of years. There is no exception to this fact, whether the trees are grown upon prairie openings or timber, clay or sandy land.

The most general error that is committed in transplanting maple and hickory trees is in selecting trees that have obtained too much size. It is an error that needs correcting next to

correcting the morals of mankind. In transplanting it should not be forgotten that

"Tall trees from little acorns grow."

Neither should it be forgotten that small trees transplated will sooner meet our desires as to size, than if we transplant those which are too large. Hickory in particular should have a body no larger than a common sized broom handle, when it is transplanted, and this beautiful tree can be made to live in most every instance if sufficient care be taken in transplanting it. It should have all its main roots as entire as possible, as it is a tree that requires more roots to sustain it than most any other kind. It can always be transplanted in the winter, with the frozen ground attached to its roots to great advantage.

Another error also prevails in the treatment of the body or branches of shade trees at the time they are transplanted. One party cut the body off just below all the limbs, and another party does not cut off any part of the top. A great *tree mania* seized the minds of the inhabitants of the place from whence I write, last spring, and finally it so prevailed as to reach that class who are supposed to be insensible to everything except their own pockets, to wit: the "City Fathers," and they ordered certain streets to be set out for shade trees, and the occupants of each lot fronting on such streets were required to set out the trees.—Having occasion to pass along one of the streets so ornamented soon after the trees were transplanted, I could not but notice the great variety which the street presented. One man had before his front fence a profusion of stubs of trees, six or eight feet high and from two to three inches through, and not a vestige of a limb left. The axe had done its work thoroughly. The next neighbor was glorifying in trees with all their tops on them, and imagining that another two weeks would exhibit them in all their original glory. Vain hopes, and short lived expectations. The stubs of the former are standing at the present writing. Time has wrought no change in the appearance. No limbs, no branches were put forth, and there hey stand, the solitary but life.ess sentinels of he place. The next neighbor, who left all the branches entire, "hopes on, hopes ever," with but an indifferent prospect of ever realizing his hopes. He says he must "bank up around the trees," to keep the wind from "leaning them," and he must cut off the dead branches that have accumulated on the tops.

We often see it announced in the advertisements of patent medicines that the proprietor "defies competition," and so might such tree setters as the above well defy competition, for while no agency is more likely to destroy animate life than the nostrums of the patent medicine vender, so we can hardly hope to find any surer method for destroying inanimate life than was pursued in the two instances named.

In speaking of the correct rule to be observed in transplanting trees, it may be proper to say, if in taking up the tree, the roots have been *all cut off*, then cut off *all the top*. But if a portion only of the roots have been cut off, and that portion the outside ends, then cut off a portion of the top, and let that portion be the outside ends. If you have taken up and transplanted your tree without the loss of any portion of a single root, you may then safely allow all the branches of the top to remain entire.

It can hardly be supposed that any great number could be found who would not prefer to see a maple, hickory or evergreen tree, when standing in the open grounds, to a locust.—The locust never puts forth leaves having the deep green of the maple or hickory, and it is found that the leaves of the former, sooner than any other tree, lose their first color and become faded, and long before the season for green foliage has passed away we see upon the locust the "sere and yellow leaf." It is also well known that the locust never presents a top of the same beautiful formation as the other species named. On the other hand, we frequently see the locust with a main branch leading off to one side, and, if not trimmed, it never exhibits a well regulated top. The maple, without any care as to its formation, when grown in the open grounds, maintains most beautiful form and proportion. The same may also be said of the hickory, and of most kinds of evergreen trees.

Nothing, perhaps, looks more cheerless to a traveller than the sight of a dwelling in the country with no surroundings of fruit, shade or ornamental trees. When we pass such a place, we almost involuntarily hurry our animals that we may securely get by such a drea-

ry habitation before we are overtaken with a chill, and we almost as involuntarily cast the character of the occupant of such a place, in our mind, by the scenery, artificially created, which we see about his habitation. If we reach a place and find a habitation with the front yard "well combed and cared for," ornamented with shade trees and flowering shrubs—a thrifty orchard standing in the back ground, the fruit garden having in it grape arbors and other fruit trees—these are the attesting witnesses, the living evidence that the occupant is industrious, frugal, and has a good mind. The velvet sward, the clustering blossoms, the green leaves of the trees and the ripening fruit proclaim to the passer by the general character of the husbandman.

How much pleasure? Yes, who shall say how much pleasure does a person realize in passing through a portion of country where he sees landscape after landscape, where sunny spots have been created by the last, industry and refinement of the inhabitants—all agreeable and pleasing to the sight, yet no two alike—no one the exact counterpart of the other.

The young man who has left such a home and gone to the rich sands of California in search of gold, looks back with a sigh at the remembrance of the beautiful homestead he has left behind. The youth who has left his father's house and travelled over the American Continent in a vain search for happiness, turns at last his wavering steps, to look once more at the familiar trees that surround his father's house and finds happiness at home.

The maiden who has left her father's house and sworn to forsake all things else and love only her lord, must return ever and anon to do homage to the beautiful landscape. M.

From the Southern Farmer.

Broom Corn and Broom Making.

Why is it, Messrs. Editors, that the cultivation of the broom corn is so much neglected in Virginia, when there is scarcely a more profitable crop in the State? We pay yearly a large revenue to the New York and New England farmers for this article, which can be raised as successfully here as in any part of the world.

I have been informed that the farmers on the Mohawk river are making fortunes by the cultivation of broom corn, while the manufacturers are also realizing fortunes by broom making. I am advised of the existence of only one farm in Virginia on which the cultivation of broom corn and making brooms is carried on on a large scale.

Messrs. Look & Lincoln, two enterprising gentlemen from Massachusetts, now located about two miles from Christiansburg, cultivate, as I have been informed, about thirty acres of broom corn, and manufacture brooms for market, for which they find ready sales at full prices. These gentlemen also manufacture cheese of very superior quality, while their wives manufacture very excellent palm leaf hats.

Too much praise cannot be awarded to these gentlemen and their families for the energy, skill and enterprise with which they have gone into these various occupations; and they deserve from their fellow citizens the most liberal patronage.

I have thought that Petersburg would afford a fine opening for a professed broom maker, and if I could procure a man acquainted with the management of the crop, from the planting of the seed to the manufacture of the brooms, I should be glad to aid in starting such an enterprise.

It is time for us to take upon ourselves the manufacture of all articles of prime necessity, instead of sending to the North for everything. From a wooden button to a saw mill, all must come from the North. Our hats, our shoes, our books, every article of our wearing apparel, the finery that adorns our wives and daughters, in short, everything, even our fashions, must be drawn from the North.

It is time to establish our independence.—We have too long been paying tribute to the North. We have been too long pouring the profits of our labor into the overflowing coffers of that rich *North*, whose people, so far from sympathizing with us of the South, curse us in their hearts, denounce us as worse than savages, and are seeking, with a fiend-like malice and envy, to scatter fire brands in our midst.

But to return to the broom making, I have no statistics from which to prepare an estimate of the amount paid out by the South for this article; I am certain that if the amount were stated, it would strike some of your readers with profound astonishment.

It is the fashion of the day to decry the low

state of Virginia agriculture and the slave laber, as the causes of our comparative poverty; but it is not true. It is this everlasting tribute to the North that makes herself rich and ourselves poor. Our money is ever flowing in copious streams Northward—none, comparatively, ever returns. We not only buy all our goods, wares and merchandise from the North, but our produce must be shipped in Northern vessels. We have indeed become "hewers of wood and drawers of water" for the North.

Well, where is our remedy for these evils suggested by a simple reference to broom making? In one word "the division of labor." Our noble rivers and our mild climate, afford facilities for manufacturing, not surpassed by any country. Let the capitalist lay out his money in various large factories; let him call on the Virginia farmers to feed his operaiors; let the farmer buy and consume his fabrics, and then the money that now goes to pamper the capitalists of the north will circulate at home, and Virginia will soon become rich.—But let us continue to draw all our goods, &c. from these, our worst enemies, and our manifest destiny is *poverty, poverty, unmitigated poverty.* M.

Good! The Housewives.

We ha! ha'd! right out the other morning! Would you know how we came to do anything so undignified? It was 2 1-2 o'clock in the morning. We had been up all night working for you, prairie farmers, and your wives, sons and daughters. As a respite, we took up the New York Tribune, of Friday, Dec. 19th. In November, Horace Greeley published an article—"The art of Living"—which has brought down a perfect avalanche of correspondence from American country housewives. This correspondence was published in the paper we allude to, (the 19th,) and we enjoyed the half hour spent in its perusal.

Among other assertions, Mr. G said, "As a general rule, in the country there is nothing fit to eat"—that "civilized life in the country was lower than that of the Indian"—"coffee all slops"—"tallow butter"—"sodden bread"—"the people are not clean"—a "greasy mob"—"do not wash themselves"—"a chaos of crude dishes"—that "in most houses in the country the cooking and sitting rooms and nursery are rolled into one," and calls the country housewives "Yahoos!"

These are the quotations we find commented upon in no stinted terms by the respondent housewives. It is doing good—will apply equally well to the city as country. There are honorable exceptions in both country and town, but they are *only* exceptions. Four-fifths of the population of the United States do not know *how* to live. However severe Mr. G. may have been—and however little his assertions may apply to a class, they are too true as a whole. One lady writes, "It is very far from being a general custom to prepare warm bread for breakfast, except, perhaps, in some portions of the West, but only a small proportion of the country people are 'Suckers' or 'Hoosiers!" What say the "Sucker" and "Hoosier" wives to that? The same writer winds up:

Yes, indeed, Sir, well that you be out of the reach of these "Yahoos," male or female, else they might convince you of the existence of traits of character even more striking than those for which you have given them credit. Unless you speedily change your opinions of country people in general, we most earnestly hope that you may never again be the subject of a solitary rural enjoyment. If you ever mount your horse for a glorious gallop in the country, may "black care," as in days of yore, jump quickly up behind. Should you ever indulge the hope of rest and a sweet siesta in a woodland ramble, may every exploring bug and beetle seek out your ears and fill your dreams. May never a hospitable friend open his doors to you in peach or strawberry time; and may thunder and lightning play a never-ending accompaniment to all your pic-nic excursions until you shall revoke your hastily formed decisions and learn to do your neighbor justice.

Another says:

My children are up at 5 o'clock in the morning, do up the chores, and then go to school. They are somewhat acquainted with *fresh air*, as they *live mostly outside.* Send me some of your sickly children and I will show you the "art of living" practically, in building up their constitutions. It is all very well to write about the "art of living" in a smoky eight-by-ten sanctum; but let me tell you, farm-work, early rising, and country meals will do more for a man, woman or child, than all the newspaper preaching in the world.

The art of living is a simple affair. There are but two words that make it up—*work and appetite.* Let a man learn the art of working and the art of living will follow. You city people are forever getting out your cook-books and your forms, and "practical observations," and all that; and moreover you are forever reminding country people that it is you alone who know how to live; but bless your soul, your sickly faces, emaciated bodies, and gaunt frames, prove most absolutely that a "dairy farm," good but plain food, and *work*, would make men out of you all.

In conclusion, Miss Leslie was an old maid. I am a wife, a mother, and a hard-working woman. Now, would it not be odd for a woman who never raised a family, to step in and tell me how to make pies, and prepare coffee. My family consume from fifteen to twenty pies every week, and the great difficulty is to keep up the supply.

Another:

"As a general rule," you say, "in the country there is nothing fit to eat." A more gross slander has never been uttered against the "country housewives." Really, one would suppose that you had spent your days in the stench and miasma of the city, where rotten fowls are sold at the shambles for good as new (vide *Tribune*, Nov. 28)—where rotten and cayed vegetables are palmed upon city ignorance for sound—where travel-wearied, famished cattle are butchered and dealt out to city epicures as first quality—where slop-fed milk, and that half water, is called "cream," by city folks! You sir, with stomachs that can relish *such* food, to talk to country people about good living! Even blubber-devouring Exquimaux appreciate wholesome, civilized, well-cooked food!

Again:

And as for country cooking, which so excites your wrath, it is as much ahead of city cooking as are the articles cooked. You talk of our "coffee being simply slops"—that we put too much warm water and not enough "cream" into it. This is simply ridiculous. Had we such "cream" as you, we should want no water at all in our coffee. Our "cream" is too strong for your stomachs; you are not accustomed to it.

Then our country "butter is too much like tallow!" Why are you growing facetious.—You of the city think if you can get soft and yellow colored stuff called butter, you are fortunate; and fall to pitying us country boobies, for letting you have our best butter, and ourselves eating tallow! I did not suppose such sheer ignorance could be found, even in the city. How the "bread is sodden;" and the "meat tough, cooked and greased to the consistency of sole-leather." O! where have you been? Have you been rusticating in some log cabin among border ruffians, beyond the reach of civilization, with men to make your "tallow butter," your "sodden bread," your "slop coffee," and your "Heaven-knows-what-all?" Or have you been so canibalized by bad city provisions, worse cooked, that your stomach rising to the brain, can only find vent for abuse and bad treatment by fulminations against what long continued bad habits have disqualified you for appreciating, country food and country cooking.

And then you, a sticker of types, and a quill driver, pretending to lecture us country housewives upon rules of cookery, when every word you have uttered on the subject exhibits your perfect igoorance of the whole matter. Such ignorance in our cooks would not be tolerated in the country, we should discharge them; and they could only find employment in the city.

Here is one chiming in on the subject of ventillation, &c.:

We are glad to see your remarks respecting ventillation and daily bathing.

But do you suppose that the majority of women are going to do anything different from what our grandmothers did? If they thought it conduced most to health and comfort to sleep in a small box with the lid screwed down to avoid taking cold, we surely may do the same; and if they did not think it beneficial to scrub up their children every day, or once a week, we are not going to expose the health of our precious ones, for we want them to live as long as possible. Perhaps we may do it when it is new moon, if the weather is warm.

For ourselves, we have had a tolerable excuse for living dirty the last six months, as we have not had water enough in this section of country to keep the children's faces clean; but now that the late rains are filling our wells and

cisterns, we hope to improve our external appearance.

One acknowledges that poor cookery is one of our faults, but it was "inherited from tea-drinking England!"

The last says :

You say, "As a general rule, in the country there is nothing fit to eat." Now, this is not a general rule. I can hardly decide in my own mind whether the writer has been bred in low life in the country, and making his first visit to the city goes into ecstacy over a well cooked steak and a cup of coffee, or whether he is writing about things wholly beyond his knowledge. If town bred, he must have been particularly unfortunate in his country associations. Of country-life in New England, I have nothing to say. Let those who were reared there look back to an old fashioned breakfast, cooked by the ample fireplace, and say if in cities they have ever tasted one with greater relish. I could show you rural districts in our own State, quite out of the sound and sight of the great world, where not even the shrill scream of the steam whistle echoes among the hills, and even there you might, feast royally every day. You would remember that place for many a day, if you were possessed of a dyspeptic stomach.

But Mr. Greely rallies! He is not overwhelmed crushed, or annihilated. Stoutly persists he is doing a good work—says, by way of defence :

"It would be provoking if it were not amusing to note how much ingenuity is shown in perverting what we have said. Thus one lady writes boastingly of her milk, butter, fresh vegetables, fresh eggs, fine fruits, pure water, and wonders how we can pretend that city people have equally good. Why, madam, we never thought of such a thing. You, in the country, have incomparably the best materials from which to prepare food—nobody ever doubted *that* ; but it is the *use* you make of those materials that we criticised, Your table may be a model of good judgment and good cookery ; we know those that are ; but this is by no means the general case. On the contrary, we know of some of the finest fruit sections in our country in which you will not be offered a particle of fruit with breakfast or dinner for at least nine months in the year ; salt pork, poor bread and a muddy preparation they call coffee, are the staple of breakfast, and the same *minus* the coffee and *plus* a lot of watery potatoes are the substance of most dinners.—Should not this be reformed ? It is far dearer, less nourishing, less palatable, less wholesome, than a more varied, digestible and savory fare.

Our young ladies—there being no girls now exceept Irish—are educated to play the piano somehow, to work sundry articles in Embroidery or otherwise, which we could safely name and would prefer not to judge, and to imagine they know something of the ologies ; but their education for the management and oversight of a household is sadly neglected. It is rather hard that a young mechanic, with no fortune but his hands, having just married a wife, should be compelled the next month to hire an Irish girl to cook his dinner ; but this is often the case. Let a family in the country be visited by sickness, so as absolutely to need female help, and if there be not an Irish colony within easy reach, they must suffer ; for the great mass of our farmer's daughters are too proud, too ignorant, or too indolent, to do housework even for good pay. These be deplorable truths ; but it was not so in the days of our grandmothers ; and it must be otherwise in the days of our children."

He then closes with the following, which is characteristic of his stubbornness in persisting in anything he believes right,—and such stubbornness should have more imitators—and of his frank, almost blunt manner of expressing his opinion :

"Once for all, we repeat that the country people have far better materials for food than can be secured by families in like circumstances in the cities—and some of them improve their advantages, but the great majority do not. They ought to live much better than they do, considering the resources they have from which to prepare their food. They ought to bathe far more than they do, and have better ventilated apartments, especially sleeping rooms. Those who are growing up to be farmers' and mechanics' wives, ought to think more, study more, and practice more, with reference to their prospective household duties, even though they should have to omit their piano lessons and stay away from the dancing school to that end. These be sober truths, and the best housewives should know it. They may cavil at some rather sweeping assertions in our first

article on this subject; but the scope and drift of that article were right, and if our indignant correspondents don't realize it, their husbands probably do. We may aggravate our original offence by saying it, yet we will say, nevertheless, that the best housekeepers in the country know that the average cookery all around them is hideous, and that, instead of scolding us, they approve of most of our strictures. We apprehend that some of our shrewish critics confound abundance and variety of food with generous living. They could not make a graver mistake."

We commend these thoughts and assertions to the careful and sober consideration of our readers. If you take exceptions, we shall be glad to receive them. No one doubts but a reform is needed. Let it be commenced at once.

Random Thoughts on the Feet of Horses, and Shoeing.

Great diversity of opinion exists among men as regards the best method of shoeing; but the reader may consider, as a universal principle, that the best system is the one which preserves the natural position and tread of the foot, and adapts that kind of shoe best calculated to preserve the parts, and bring the frog in contact with the ground.

On the other hand, no specific rules can apply to the general art of shoeing, because horses feet differ, both in health and disease, that a certain form of shoe adapted for one horse would be unsuitable for another. Therefore, as the *feet* differ, so also must the *shoes*.

We take it for granted that the hoof is elastic—that it expands in downward and backward directions. If any persons doubt the expansibility of the hoof in these directions, we would remark, that this must have been the intention of nature, for the hoof is left open at the heel, between which is interposed a soft elastic substance, termed the frog, which favors the motions alluded to. Had the intentions been otherwise, the hoof would probably have presented itself in the form of a hollow cylinder. This compound expansion takes place when the foot, with its superincumbent weight of body, is planted fairly on the ground, and is *regulated* by the force of the effort it has to sustain.

The parts within the hoof, possessing also the properties of contraction and expansion, or rather articulation, change their form *also* under the influence of pressure—acting conjointly to lessen the shock of concussion.

Now, in order to favor this expansion, so salutary as it must prove to the foot, the nails must not be inserted any nearer the heels than the safety of the shoe requires; for we shall readily perceive that if the shoe be nailed all round, the hoof is then fettered at its base, and of course cannot admit of the least motion. Two nails on the in, and three on the outside, are all we need to secure the shoe: provided, however, the nails be counter-sunk and well riveted or clinched. If they are not, the shoe soon becomes loose, in consequence of the nails being driven home by repeated blows on their heads while the horse is travelling on hard roads.

The shoe must be applied with an understanding, that whatever be the nature of the road, the frog must come in contact with it. In England, many of the roads are macadamized—their surface being strewn with flint stones, their edges almost as sharp as a razor; yet this does not deter the smith who has studied the anatomy of the foot from letting the frog come in contact with the same. No; he is aware that nature is ever ready to adapt every part of the system to circumstances.

We all know that the soles of the feet of children who are accustomed to go barefoot soon become callous—almost insensible—just so with the frog: the nature of the ground over which the horse travels determines its form, character and endurance. Examine the frog of the colt: we shall find that it is well developed, full, prominent, and callous. This is the result of the stimulus and hard knocks it receives in travelling over all sorts of road. Look at the same animal's foot after he has been submitted to the popular evils of domestication and shoeing, and we often find it wasted and almost obliterated—a mere apology for a good frog.

The blacksmiths, however, are not at all times accountable for this, for, in the winter season, *caulks* seem to be necessary, and then it is impossible to bring the frog in contact with the ground; so that during this period its function may deteriorate. And disease of the foot also alters the structure and size of

the frog. A deep-rooted prejudice exists in favor of cutting away the superfluous frog; but so soon as its function shall be understood, the error will cease.

There are many reasons why the frog should never be mutilated, and we shall mention two or three. In the healthy frog there is a solid wedge-like portion of horn extending from the cleft to the point of the toe. It lies directly under that small, yet very important bone, called navicular. The bone itself and its associate tissues, are often the seat of a very painful disease, known as naviculartritis; and we think it often arises in consequence of removing this bulbous prolongation, termed the anterior point and bulb of the frog. Its principal use is to protect this very important bone, and shield it in this direction from the violence it must occasionally meet with on rough ground.

A very distinguished surgeon asserts that, when once this bulbous enlargement is shaved off it can never be reproduced, and that is the reason why we cannot find it in many shod horses. It not only protects the navicular bone, but to a certain extent the coffin point. Yet there is no part of the frog with which greater liberties are taken than with this. In fact, it generally undergoes a pretty essential whittling every time the horse gets an introduction to the man of knife and butteris. The bulb of the toe once removed, nature causes augmented secretion of horny surface to supply the deficiency. The secretion is very abundant, but nature is no match against edged tools—the faster it goes the better chance is there, by those who feel disposed, to whittle at every subsequent shoeing. Such extraordinary efforts at reproduction soon impairs the secretory function, and we then have a hard brittle substance, destitute of elasticity, which almost defies the knife of the shoer.

Then consider the frog itself—that well-defined promontory—that cushion-like substance, which, by coming in contact with the ground, prevents jar and concussion, not only to the sensitive tissues within the hoof, but to the joints above—in fact, it lessens body concussion. It is a part which develops itself in the same ratio with the hoof and sole, establishing a bond of union between the sensitive tissues and the insensible. A part, therefore, which serves as the basis of the animal structure cannot be removed with impunity.

Cut away the frog and we take away the solar support, and prevent that sole coming in contact with the ground. Now, put on a shoe having no bearing but against the hoof, and we shall readily perceive that the horse's weight is borne by the hoof—so great a weight having no opposing resistance except that furnished by the inside of the hoof, must naturally lead to strain of the laminæ and descent of sole.

Descent of sole implies laminal dislocation; the horse is then in a partly ruined condition. We contend, therefore, that the frog should seldom, if ever, be interfered with. We may remove the rough and loose portions about as much as the animal without shoes would naturally wear off; and this is not always good policy, for the ragged, uneven parts, often serve as a protection to the new formations above. The part looks better for paring, we grant, but health does not consist of beauty alone: we have seen some very handsome horses, yet having the finger of death on them. You may get a very handsome hoof by *rasping* or scraping it with glass, but we will defy any man to make a healthy one by the same process.

The time *has been* when the cutting away of the frog was recommended by some very eminent men—so that the smiths who now practice it in good faith are no more to be blamed than the former. One author has tried to smooth over the affair by observing, that "the frog offers so little resistance to the knife, and presents such an even surface—so clean, nice, and smooth, that it requires more philosophy than smiths generally possess to resist the temptation to slice it away, despite a knowledge that it would be far wiser to let it alone."

If the opinion of veterinary surgeons is of any value, the reader must confess that the error of paring the frog is injurious. One of the best authors on the subject says, that he never allows a knife to approach the frog, because experiment has shown that the frog possesses less power of reproducing horn than other parts; and the same individual has had horses in his possession five years, whose frogs never made the acquaintance of a knife.

Examine the structure of a frog, and you will find that it is covered with a thin, delicate envelope—a texture once removed is sparingly reproduced. Cut it off, and the parts beneath are unprotected—unfitted to grapple with hard ground or exposure to atmospheric changes

they contract in consequence of violence or exposure, and we get an inferior frog.

But the reader may ask, how is the frog to disencumber itself of its apparently rugged and superflous surfaces. We answer, nature has provided a means—a casting off of the frog surfaces, now and then, takes place. But we shall find that when this does occur, a new horny covering has formed beneath—a smaller frog appears, still an entire one, capable of repeating the same process over and over again. Therefore, let us try and let the frog alone.

An idea has generally prevailed that the hoof should be circular. This is a great mistake; for if you examine the *colt's* foot you will find the toe and outer quarter describing a circle, but the inner approaches the heels with less curve. By this arrangement there is less liability to strike one foot against the other limb. Therefore, any attempts by knife and rasp to make the hoof describe a circle is contrary to the intentions of nature, and injurious to the horse's foot.—*Amer. Vet. Journal.*

The Guano Trade.

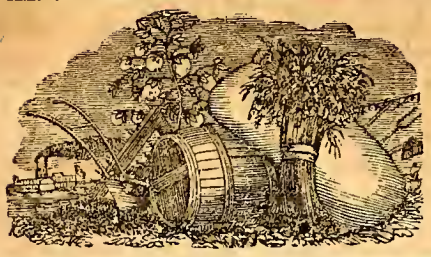
The New York Evening Post furnishes some interesting facts respecting the guano deposits belonging to Peru, and the manner in which the business of removing and disposing of this important fertilizer is conducted. The guano islands (the Chinchas) are about one hundred miles north from Callao, the longest of the group being two miles in length by half a mile in width; there is but little guano on the largest island, while upon the smallest it is two hundred and fifty feet deep. There are often from three to five hundred sail of vessels, generally of large size, loading at one time. At the rate which guano is now shipped from these islands, it will be exhausted in six to eight years. Twenty thousand tons are sometimes removed removed in a day. There is on one of the islands a settlement of Chinese Coolies, who are employed in digging the guano and loading the vessels. A task is given them each day, and if the gang fail to get out the given number of wagon loads, of two tons each, a day, their bondage is continued a longor period, to make up; so many months or days being add ed as wagon loads are wanting.

These coolies are cheated into the belief by Mandarins, or knowing Chinamen, that they are to be shipped from China to California and the gold diggings, and are further deceived by the offer of a free passage. The shipmaster takes them to the Peruvian government and sells them for a round sum in the shape of freight money, and they are sent to the guano islands for life or for a term of five to seven years. The Peruvians also send all their prisoners of State, some two or three hunded, into the guano mines, where they are let out to work by day and confined by night.

The guano is hard and can only be broken with the pickaxe. It is then broken and shoveled into the wagons and rolled through the "shuters" to the vessels. There is no fresh water upon the islands, and each vessel is required to carry a tun of water there for every hundred tuns burden of the ship. The oldest captain in the fleet from each nation is appointed Commodore, and hoists his flag as such on his ship, where all disputes are settled. Indeed the municipal laws of the islands and the fleet are decidedly of Yankee origin. Says the Post :—

"The islands are about ten miles from the main land and are composed of new red sandstone. The guano is not all bird dung, but is largely composed of the mud of the ocean; that brought from *Peru*, is so, at least. When anchors are hoisted into the ship from the holding grounds of vessels along the Peruvian coasts, large quantities of mud, of a greenish white color are brought up, and this mud when dried makes guano equally good with the guano taken from the islands. The birds and seals come upon the islands when the people are not at work, but it does not appear that their dung or decayed bodies are more than a foot deep on any of the islands. The composition taken from the islands, called guano, is stratified, and lies in the same form it did before it was lifted up from the bottom of the ocean. Our informant says that a geological examination of the islands will satisfy any man that the guano ships are bringing away from these islands a very different thing from the dung of birds or decomposed animals.

Gibbs & Bright of Liverpool, have a lease of the Guano Islands from the Peruvian government for five years, which expires in 1857, but hope to get their lease renewed. This house pays the Peruvian government about $4,50 a tun for the privilege of taking all the guano from the islands, the government furnishing the men to dig the guano." Boston Journal.



THE CAROLINA CULTIVATOR.

RALEIGH, FEBRUARY, 1857.

Cameo-Types.

This is the name of a new style of pictures taken by Messrs. Havens & Mallon, at their Gallery. It is an invention of their own, and is becoming decidedly popular. The appearance of the cameo-types is very much like that of the stereoscopic pictures, without the trouble of looking through the glasses. Messrs. Havens & Mallon are also taking beautiful pictures in all the different processes of the art. We have lately seen some superior specimens of Photographs of some of our public buildings, which cannot be surpassed anywhere. These gentlemen richly deserve the patronage they have been receiving.

Close of the Volume.—The present number closes the second volume of the Carolina Cultivator. Some of our subscribers are yet in arrears for the first volume, and some for the second volume. We hope all will at once enclose the amount of their subscriptions.

Situation as Teacher wanted.—By reference to our advertising columns, it will be seen that a young lady at the North wishes to obtain a situation as teacher of the English branches, Music, and Drawing, in some school or private family at the South. Communications on the subject may be addressed to the editor of the "Carolina Cultivator."

Spring.—The tokens of Spring are multiplying around us. Whatever your hands find to do, do it with your might.

☞ "Chatham's remarks" are seasonable indeed. He has the plough by the right handle. Let him stick to it.

For the Cultivator.

Mr. Editor :—Dear Sir :—Your Cultivator has come to hand for Jauuary, and that reminds me that I owe you for the present year, and so I enclose you one dollar, which you will place to my credit. I find many things in the Cultivator that I consider both good and interesting. But is there not more than usual good sense and plain chat in the article entitled "Gentlemen Farming." I confess myself highly pleased at that piece.

I believe in Gentlemen Farmers, but this "Gentleman Farming" is like the stork eating soup out of the dish, or the hen with a brood of ducks near a pond. They may make a fuss, but dont *do* much. The stork does not get much, and the hen but little notice.

When I meet these gentlemen (*no*) farmers that I know could not earn, or command half the wages of a fifteen year old plow-boy, talking about farming, and telling me that I don't know how to farm (which I found out ten years ago.) I am sure to feel some contempt for such.

Farming is the easiest thing in the world to talk about, but when it comes to raising a large family on a poor farm, and educating the children and improving the farm and keeping the stock, all doing well, it must be done with gloves off, or not at all ; always there, and always at it.

What we want at this time is a stimulus to excite us to do what we know should be done, and that right away, and at the right time, and right place. Let a farmer study what he can do and do it well, and in finding out what ought to be done and commence doing it until the time is past, causing all common sense folks to laugh at his good sense in planning. Perhaps you think I may be opposed to farmers studying ; not so, let them study and learn all they can, but I am for *doing*, and not all talk. Talk may do for lawyers, preachers and politicians, but *doing* is the business of the farmer.

CHATHAM.

Water Proof Composition of Leather.—One-half pound tallow, 2 ounces of turpentine, 2 ounces beeswax, 2 ounces olive oil, 4 ounces hog's lard. Melt the materials by a gentle heat. Rub the mixture on the leather a few hours before using. It should be rubbed on new boots or shoes two or three times before using them. By adding a small quantity of lamp black and increasing the quantity of beeswax an excellent *black ball is obtained.*

The Horse and his Improvement.

Important and necessary as it is to secure the best possiblo condition, make, and character of both sire and dam, it is not sufficient to insure comp'ete success. In a world where briars, weeds, and poisonous grasses grow spontaneously, and the fruits and grains which support life are grown only by laboriuus cultivation, eternal vigilance is the price of a good life, and ample sustenance. The first conditions being settled, leaves no recess for slumbering. The mare needs constant care. She must be kept in good health and condition—must be fed with care, both as regards quantity and quality; must be sheltered from storms and bad weather—must have exercise and room for recreation, avoiding sudden, violent exertion;—must be kept free from the noxious gases of foul and illy-ventilated stables;—should be combed and rubbed frequently, and, in shurt, everything should be dune which tends to cultivate and sustain that condition of life, strength, action, and spirit, to be desired in the offspring. The forming animal derives no elements of its being from other source than the mother's system. During gestation, her vital fluid fills the fœtal veins, and and if, from any depressing or exhausting influence that blood is deficient in vitality, it cannot supply that life and energy, that perfection of development, to the new being which a better conditioo would impart. Every influence affecting injuriously the mother's health, vitiates the life fountain of the new being; hence the necessity and value of the utmost care and attention during the period of gestation.

All the attention requisite before foaling is equally importaut afterwards. In the one case, the fœtus derives its nourishment direct from the blood of the muther: in the next, the foal obtains its sustenance from the milk made from that bloud, and it is not less important that the blood be healthy and pure to insure the proper quantity and quality of nutriment to the young animal. For this reason the mare should not not be put to hard work soon after foaling, nor, indeed, to severe and constant toil during the time of suckling her young. She would be well fed, and allowed good pasturage, affording both food and room for exercise. An idea that half starved and stunted colts, make tough, hardy horses, has long existed ameng a portion of the farming community; and so opposed is it to all facts, so contrary to all the teachings of reason and philosophy, so absurd in itself, that its very existence is astonishing. When every tissue of the organization is made up frum tho nutriment taken into the system, and from that only, as every ono knows, it is not easy to conceive how those tissues should be better formed it only half supplied with forming materials; yet such has been the idea. And though a few good animals have been raised in this manner, it needs but a moment's thought to decide that they must have been much better if well cared for, and fully fed. Observatiun, it is thought, will convince any ono that such horses are imperfectly developed, are more liable to the encroachment of diseese, are wanting in action and spirit, and do not exhibit that symmetry and beauty of form characteristic of well fed animals.

Youatt, who has written much, and scientifically, upon the economy of the horse, says:

"The breeder may depend upon it, that nothing is gained by starving the mother, and stinting the foal at this time. It is the must important period of the life of the horse; and if, from false economy, his growth is arrested, his puny form and want of endurance will ever afterwards testify the error that has been committed.

There is no principle of greater impurtance than the liberal feeding of the foal during the time of his growth, and particularly at the time of weaning. Bruised oats and bran, or other nutritious and easily digestible articles, should form a part of his daily food; and the farmer may be assured that the money is well invested which is expended on the liberal nourishment of the growing colt. With liberal range, he should have good shelter from storms and the inclemencies uf the weather. Too often, however, after weaning, he is left to struggle on as he can, and becoming poor and dispirited, may be seen shivering beside a fence, rheum running from his eyes, his rough, shaggy, dirty coat, a habitation for vermin, and himself a sad specimen of poverty and misery. Not a great number of such cases may be fuund at this time, compared with the past; but there is far too much carelessness and inattention to young animals of all kinds. The dictates of humane feeling and the demand of the owner's purse, when understood, will remedy the evil; and reform, in these matters, as in most others, will come from a knowledge of, and reasons for the better

way. The agricultural wealth not yet developed, both vegetable and animal, may some day astonish the dull eyes of the present old fogyish portion of young Ametica.

As horses are mainly valuable for their utility to man, it is apparent that the full development of the physical system of the animal is not all that needs to be secured, though that is necessarily the primary department, upon which all else is to be based. The best developed animal might be so vicious as to be entirely valueless; though it is a rule that development of form and of disposition correspond to each other. Yet, the horse being one of the most intelligent of the animal creation, and easily trained into objectionable as well as desirable habits, it behooves every one having the care of young horses and colts, to guard carefully the influences brought to bear upon their disposition. The usual custom throughout the West has been to let them run wild almost, until three or four years old, and then put them through—not a regular system of "breaking,"—but such exercises as the disposition of the master might dictate at the moment, and which often exhibited far more of the spleen and irritability, impatience, and violence of temper of the man, than ef care for the horse. Almost the first experience of life the colt gets, after he has learned the use of his legs, is a pelting with small stones, clods, sticka, or switches, from mischievous boys, who delight in his infantile antics to avoid his persecutors; and thus, from the first, he learns to look upon man as an enemy to be dreaded and avoided, while evil disposings to kick, striks, &c., and ill nature generally, are forced upon him. Age and strength accumulate, and with them ill treatment, (for the amusement of its masters it may be, or by virtue of their thoughtless disregard of causes and effects,) until, when large and old enough to become serviceable, the difficult and dangerous process of "breaking" becomes necessary. And it too often happens, that when this is well done, as all admit it should be, the horse is really broken, and has lost all that spirit and nobleness so much admired in this truly noble animal. The whole idea of "breaking" implies, in fact, a necessary evil, is part of the same philosophy which once made our school houses depositories of birch and theatres of tragic cruelty; a philosophy which, thanks to enlightened progress, is rapidly passing away.

The colt should be accustomed to kindness, and gentle, yet firm handling, from the first, and in this manner learn perfect obedience to his master's will. The halter may, indeed should be, placed upon him when quite young, and he should learn to be guided by it in any direction, and with ease; and as he grows up, one lesson after another may be added, as the owner's wishes or fancy may dictate, until, when the time comes that his services are demanded, he is ready trained for the service, educated in the way he should go, and will walk therein. The whole process should be one of careful avoidance of influence tending to create bad habits, teaching the animal what it will be required to know) before that requisition comes, and by education supersede the necessity for the unphilosophical, and often brutal "breaking."

The advantage of careful training during growth, are many and important, It affords the best possible means of developing the animal in every respect; keeps him under the constant care of the owner, and induces him to think and reason upon what he does—creates a sympathy, so to term it, between them, which elevates the character of both. It prevents the vicious habits usually engendered from carelessness of the owner, and which cannot always be eradicated, and avoids the cruelty and abuse of "breaking." The horse may be made tractable, reliable, and safe, without having his energy and spirit crushed out of him; and he may be noble, active, and proud in his movements, without being restive, irritable, and treacherous, and as a consequence, will be more easily kept in fine condition and good health. It is only a continuation of the principles of breeding, extended to the full development of the animal, here advocated; and, while all cannot be equally successful in this, as in any other of the pursuits of life, all will be more successful, and richly rewarded for their efforts to attain it. The principal reasons for the general untrained character of horses, seems to be the lack of any systematic effort at training, and the uncontrolled passions of those who have the handling and care of horses. It is no uncommon thing to see angry bipeds venting their passion upon unoffending animals, as the most convenient recipient of their ire. And such scenes are not confined to the street, the highway, or the farm; but are found in all. The effects are mischievous, and ruinous to the best interests of the owner; because injuring and depreciating in value his property in the market. Horse education, really, is a marketable commodity, and may be, indeed always is, estimated in dollars and cents.—*Ohio Valley Farmer.*

Crystalization of Wrought Iron.

The following is from the *Mining Magazine:*

"This peculiar change in wrought-iron is a subject well worthy the most careful examination, at this time when wrought-iron is every day becoming more and more used. That certain causes produce a change in the iron by which its strength is greatly diminished, and its fibrous quality destroyed, without any perceptible external change, the observations both in England and France leave us no room to doubt; and it is of the first importance that these causes should be well defined, and, if possible, the time during which wrought-iron can be subjected to them without incurring risk of fracture, determined by observation and experiment. The fracture of axles of locomotives and cars is not uncommon, and many lives have been destroyed by this accident, which has frequently happened in the ordinary working of the road, without any increase in the average load or speed, and without any previous sign of weakness. The experiments published show that when subjected to shocks and torsions, wrought-iron has a tendency to assume a crystaline state, and becomes brittle; this change may also be produced by magnetism and heat, and by the process of manufacture.

Mr. Hood, at a meeting of the Institution of Civil Engineers in England, stated that a large anchor, which had been in store for more than a century at Woolwich Dock, and was supposed to be made of extremely good iron, had been recently tested as an experiment, and had broken instantly with a comparatively small strain. The fracture presented large crystals. In this case, Mr. Hood believed that this effect was produced by magnetic influences dependent on the length of time the iron had been in the same position.

Mr. Low stated that at the gas works under his direction, wrought-iron fire-bars, though more expensive, were generally preferred. A pan of water was kept beneath them, the steam from which would speedily cause them to become magnetic. He had frequently seen these bars, when thrown down, break into three pieces, with a large crystaline fracture. The same change may be produced in any piece of wrought iron by heating and rapidly cooling it by dipping it in water for a few times.

This change is also often produced in iron by hammering it when below a welding heat, and in forging intricate pieces of iron work, the ends have frequently been jarred off while the other were being hammered. The larger the piece of iron is the more difficult it is to keep it an uniform heat, and the more likely this change is to take place; and we have lately learned from an English paper that Mr. Nasmyth's wrought-iron gun has proved a complete failure; and this, not on account of the mechanical difficulties which had to be encountered—formidable as they were—but from an unexpected peculiarity in the material employed, when brought together in so large a mass as was necessary for Mr, Nasmyth's purpose."

The explosion of the large wrought-iron gun on board the U. S. ship Princeton, some years since, was doubtless owing to the same cause.

Concussion alone, if long continued, will produce this change. A small bar of good tough iron was suspended, and struck continually with small hand hammers, so as to keep up a constant vibration. This bar, after this experiment had been continued for some considerable time, became so exceedingly brittle, that it entirely fell to pieces under the light blows of the hand hammers, presenting throughout its structure a highly crystaline appearance.

The cold hammering of railway axles sometimes produces crystalization in the same manner as in the experiment just cited. In order to test this, Mr. Nasmyth subjected two pieces of cable bolt iron to one hundred and sixty blows between sways, and afterwards annealed one of the pieces for a few hours. The unannealed piece broke with five or six blows of the hammer, showing a crystaline fracture, while the annealed piece was bent double under a great number of blows, and exhibited a fine fibrous texture.

The shocks which the axles of road vehicles experience in use sometimes occasion this very change, though the process must be slow when compared with that of railway axles. The wheels of cars and locomotives being fixed to the axle, and the axle rotating is much more liable to this change from two causes. Where the wheel is of cast iron, the different vibrations of the two different materials seem to facilitate this change, and in this country, where cast-iron car wheels are to a great extent used, the fracture generally takes place close to the wheel. Owing to the rapid rotation of the axles they

become highly magnetic, and there seems to be a close connection between magnetism and crystalization. The presence of steam seems to have an influence in producing this change, owing, perhaps, to the development of electricity, and this may have a great effect upon the axles of locomotives.

The severe winters of New England, as well from the action of frost on the iron axle, as from its effect in making the track rough, doubtless has a tendency to hasten the process of crystalization, and to produce fracture in axles affected by this change. We have known of the fracture of the axles of the driving wheels of two locomotives occurring on one road in New England in one week during the month of February, 1856. One of them was broken close to the wheel, and the whole surface, from the center to within an eighth of an inch of the circumference presented a bright granulated appearance; a narrow rim extending round the whole axle looked smooth, and of a duller color, as though it has been fractured for some time.

From the fact that this process of crystalization appears to begin in the center of the axle, and from a belief that the effect of the blows and concussions which an axle receives would be greatly diminished if the axle was made hollow; this plan has been tried upon several English roads, with highly encouraging results. A hollow and a solid axle have been run hot in a lathe for two hours, with ut oil, at a speed corresponding to twenty miles an hour traveling; the solid journal broke of, with 179 blows, quite short and crystaline; but the hollow journal would not break tranversely, and longitudinally in several places, with four hundred blows, without any appearance of change in the texture of the iron.

There seems to be no doubt that, under circumstances, wrought-iron is liable to undergo a change by which its strength and tenacity are destroyed, and that railway axles are in a special manner liable to this change. Some of the causes, or supposed causes of it, we have briefly alluded to; not with sufficient fulness, perhaps, to afford much valuable practical information, but enough so, we trust, to lead others, with better opportunities and greater abilities, to investigate this subject, so important in its bearings both on the safe and the economical working of railroads."

[We omit a part of the extract respecting the difficulties in forging the wrought-iron gun of Nasmyth. A steel gun, of larger caliber than that of Mr. Nasmyth, has, since his failure, been successfully forged at the Mersey Steel Works, Liverpool; and repeated experiments have proven it to be the strongest cannon in England. The idea, then, that huge masses of wrought-iron cannot be forged without becoming crystaline, based upon the falure of Nasmyth's gun, or that of the *Princeton*, is incurrect.]

Practical Farming---Good Crops.

Messrs. Editors—I have been for a number of years interested in agricultural pursuits, and during that time have devoted a part of my winter evenings to agricultural reading. Most of the books and essays begin with telling us a long story about what Lord A, B, or C, has done in England—or how the Belgians, Germans, Swiss, French, Italians, or Chinese, conduct their farming—in short, they have ransacked the whole world for material, and overlooked what to us is the most important—*Home*. What, to us, is the manner of cultivation among other nations? Our soil, and more especially our climate, are entirely different. What would ensure success in one place would only ensure failure in another, with a differing soil and climate—even in our own country. How much good in a *practical sense*, would an essay on the sugar cane, or rice growing, do to a Berkshire farmer? It would only add to his fund of information. I contend that all countries and all places have a peculiar method by which the most productive powers may be developed. What would be good farming in Massachusetts might not prove so in the same latitude in the Western States; and to go nearer home, what would be profitable to raise on a dry gravelly or sandy soil would not do on a wet or clayey one. It is true that many crops adapt themselves to the soil to which they may be applied, and give a fair remuneration for the manure and labor devoted to them; but still if they had been planted on soils more congenial, how much greater would have been the increase.

Almost every farmer has a variety of soils to cultivate, from the dry gravel knolls to the unreclaimed peat bog. What to him would be

of real utility, is to know the crops which are best adapted to each variety of situation, and how in the cheapest manner his land may be improved; and the best way to come at it is, I think, for the farmer to be more willing to communicate through the various Agricultural Societies and Journals, the results of their experience. How many of the tens of thousands who visit our cattle shows, ever think of putting on paper the result of their own particular farming, and handing that report to the secretary of the society. Here and there you see an account of a great crop of a certain variety of vegetable produce, and the essays, one-half are written by men who never held a plough or swung a scythe.

Come forward, gentlemen, and tell your own stories. You, all of you, possess a fund of knowledge which is to you the secret of success. Let us have it, and in giving it to others, you may receive a return that will be of incalculable value to you.

You need not say you dont understand writing well enough. If your own hands are too used to the hoe or plow to write easily, you have daughters, sons or friends, who would be willing to write as you dictate to them.

Now I don't mean to preach what I don't practice. My lands are from a coarse gravel to a peat meadow; and to begin, I cart clay to my gravel land, and gravel to my peat land, and I think it is of great benefit, and the work is done in winter.

I plow my clay lands in the fall and lay the furrow slice at an angle, and let the frost work at it.

Gravel lands are plowed in the Spring, and the compost (for I use it for every thing,) spread and plowed in, deepening the plowing each year.

My meadow land is drained so that the water is low enough to prevent the growth of the old water grasses—put *a pin in there*—(you would seldom hear of a reclaimed meadow going back to bull heads and water grasses, if they drained it lower)—in the first place.

My compost for dry lands, is meadow mud, leached ashes, and cattle manure—for clay land, night soil, loam, horse manure and sand.

I can get 400 to 500 bushels onions per acre. Manure, 7 cords compost of leached ashes, cattle manure, muck, and 20 bushels bone dust, plowed in in the Spring. Sow as early as possible. Of carrots 20 tons per acre—manure the same. Cabbage, 30 tons, or 4,000 heads of about 15 pounds each—manure, with the addition of a little night soil, is the same as for onions. Corn, I get 50 bushels per acre—same manure, harrowed and plowed under.

My leached ashes I purchase, and the bone dust comes from Boston, and these two have done more than any other manure on my light lands.

Potatoes I plant on the low lands, and when they don't rot, get about 175 bushels per acre.

Come, brother farmers, here is a rough outline: perhaps I may sometime go more into particulars. If any thing is of use to you in it, I am very glad, and, in return, give us all the methods of your own management.

R. DANVERS, *Mass.*

We thank our correspondent for the above, and hope he will favor our readers with further and more particular details of the modes by which he produces such crops. While there is perhaps some justice in his remarks on agricultural reading, we are a little afraid he forgets that *the great principles that must underlie all good farming are the same wherever it is practiced.* Drainage, rotation of crops, manures, and a clean and well tilled soil, are alike essential to it in Europe and America—as a general rule—the exceptions being confined to new lands and rich river bottoms, as yet undeprived of their original and almost exhaustless wealth of plant food. Hence a knowledge of the practice of good farmers among the "Belgians, Germans, or French," is as likely to give a Yankee the clue to successful practice at home, if understanding used, as if the transactions of which it consists had taken place in his own immediate neighborhood. We have learned much of our best farming from the systems practiced in Great Britain, and are constantly learning more. To carry off the surplus moisture of the soil, and keep it so that the roots of plants shall easily penetrate it, and the moisture of the atmosphere be absorbed by it in seasons of drought; to economize and most economically apply the manures of the farm; to select the best soils for particular crops and to cultivate them in the most profitable way, are all subjects on which we can yet profitably consult transatlantic experience. But it is necessary that the farmer should exercise a power of generalization, if we may call

it so, by which he can separate the details from the theory of practice elsewhere, whether in another county, another state, or another continent. He must think and judge for himself as to how far the experience of another man will suit his own soil and climate. There is one thing certain, that we shall never have a Compendium of Farming for every farm in the country—and so long as this is true, so long will it be essential to success to think out, every man for himself, at least to some extent, the way in which he shall individually apply the great rules we have shown to be fundamental in all enlightened agriculture.

Meantime, to elucidate these principles and bring them to the knowledge of all farmers; to induce them by degrees to improve their present modes of practice, and to place before them in the strongest light the advantages of doing so. These are just the reasons why, with our correspondent, we invite them all to "tell their own stories" in our paper, and for these reasons also that we ask their aid in circulating, and in drawing from others their ideas and modes.—*Country Gentleman.*

United States Agricultural Society.

ANNUAL MEETING AT WASHINGTON.

The attendance was larger than ever before, twenty-eight States and Territorial Agricultural Boards being represented. The President, Marshall P. Wilder, called the society to order at 10½ o'clock. He was seated between Franklin Pierce and Gov. Johnson of Tennessee. In the absence of the Secretary, Wm. H. King, who resigns his office, Benj. Perley Poore was elected Secretary *pro tem.* The President of the Society, Mr. Wilder, read the annual address, containing many practical suggestions and showing the Society to be in a flourishing condition. He stated that the attendance at the Philadelphia Fair was, on one day, 70,000 persons; and the receipts for the whole time, $40,000. He endorsed the idea of an agricultural department of Government with a secretary of equal rank with other cabinet officers. The address was referred to committees.

The matter of the proposed National field-trial of Implements was referred to a committee invested with full powers to communicate with manufacturers, inventors, and municipal authorities throughout the United States, and arrange preliminaries for such exhibition.

George Peabody, the eminent American banker of London, was elected Honorary member and special Representative of the Society at the Royal Societies of England and France. A committee was appointed to investigate the Chinese Sugar cane. A discussion was had on establishing a scale of points of animals to control the action of Judges at fairs. In the evening Rev. Dr. Morris lectured on entomology.

The nex day, with Hon. W. L. Underwood in the Chair, the Society elected officers for the year: President, Marshall P. Wilder; Secretary, Benjamin Perley Poore; Treasurer, B. B. French. A vote of thanks was given to W. S. King, late Secretary, resigned; and also to those particularly inssrumental in arranging for the late fair at Philadelphia.

The committee on locating the next fair, reported unanimously in favor of Louisville, Ky. The Agricultural Society of the district offer the free use of their grounds and pledge an indemnity fund of $30,000.

The proposition for the purchase of the Mt. Vernon estate, to be used as a National Agricultural School, was referred, after an animated discussion, to a committee. The need of more accurate Agricultural Statistics was acknowledged and the suggestions of the Commissioner of Patents approved. The Governors of each of the States will be memorialised to give their official aid in securing this desideratum. The Chinese sugar cane subject was again discussed.

On the third and last day, a committee was appointed to investigate the disease known as the "hog cholera;" a paper was read by Professor Webster, of Portsmouth, Va., on Phosphorus; one by C. L. Flint, of the Massachusetts Board of Agriculture, on Grasses. Professor Henry made a statement on the operations of the Smithsonian Institute; Dr. Newbury, of Ohio, gave an address on the agricultural advantages of Oregon and California as inferior to those of the valley of the Mississippi and its tributaries. A resolution offered by the same gentleman recommended geological surveys of the various States and Territories, passed. The Society resolved to buy Chinese sugar cane seed for 100 acres, and to memorialize Congress in favor of an agricultural de-

partment. At the close, G. W. P. Custis delivered an eloquent address; a vote was passed of thanks to Mr. Wilder, the President, who responded, and the Society adjourned.—*Homestead.*

Useful Receipts.

To Cure Cramp.—A cold application to the bottom of the bare feet, such as iron, water, rock, earth or ice, when it can be had—the colder the better. It will relieve in five minutes. If in the upper part of the body or arms, then apply the remedy to the hands also.

For Burns.—The inside of a potato scraped and mixed with equal parts of olive oil, and turpentine in sufficient proportion to make a poultice, will form a soothing and healing application.

Cleaning Stoves.—Stove lustre when mixed with turpentine and applied in the usual manner, is blacker, more glossy and durable than if put on with any other liquid. The turpentine prevents rust—and when put on an old rusty stove, will make it look as well as new.

Table of Contents.

Broom Corn and Broom Making,,	363
Cameo-Types,	370
Close of the Volume,	370
Communication,	370
Chrystalization of Wrought Iron,	373
Experiments with the Chinese Sugar Millet,	360
Good!—The Housewives,	364
Management of Fairs,	358
Prize Essay,	354
Practical Farming—Good Crops,	374
Random Thoughts on the feet of Horses, and Shoeing,	467
Shade Trees,	361
Situation as Teacher wanted,	370
The Norway Rat,	361
The Guano Trade,	369
The Horse and his improvement,	371
United States Agricultural Society,	376
Useful Hints,	377

WANTED, by a young lady residing at the North, a situation as Teacher, at the South, in either a family or public school. She is qualified to teach the commoa and higher English branches, Music, and Drawing. Credentials given if required. If in a family, she would prefer one of religious principles. Address the Editor of the "Carolina Cultivator." feb. 18—tf.

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Certificate of Dr. W. SMITH, of Pine Hill, Richmond Co., N. C., March 4, 1854.

Dr. C. M. Jackson, Philadelphia.—Dear Sir,—I have been a subject of Dyspepsia in its worst form, for the last five years. Such was my condition for 12 months that the physicians and all who saw me said I must die. While in this condition, I was carried to the watering places in Virginia, Tennessee and North Carolina, but was not benefitted by any water to which I was taken. While on my way home, I stopped a week at Rutherfordton, a small village in N. Carolina to try the effect of some Chalybeate water in that place. About the last of the week, I went into a drug store to get some medicine for my child and myself. There were several of the village physicians in the store, and one of them seemed to take some interest in my case, and after asking me some questions, said he had been a dyspeptic, and had been greatly benefitted by the use of "Dr. Hoofland's German Bitters," prepared by you, and he insisted that I should try the Bitters. He also called the next day at my room, and insisted so much that I would try them, that I asked him to get me one bottle. He did it, and I commenced taking it as directed, and I do say I was more benefitted by it than all the water and medicine I had ever taken.

After reaching home, one of my neighbors came to me for a prescription and medicine, (he a dyspeptic,) and I gave him nearly all the Bitters I had left; which effected much good in his case. He has often called on me for more of the same kind of medicine, saying he was more benefitted by it than any other he had taken, but I have not been able to get any more for him or myself since; will you, therefore, please ship me a dozen or more as soon as possible.

Respectfully yours,
W. SMITH, M. D.

GREAT CURE OF PILES.

Certificate of W. J. ATWOOD, Huntsville, Yadkin Co., N. C., Nov. 1, 1853.

Dr. C. M. Jackson—Dear Sir,—Allow me to express to you my sincere thanks for your discovery of a medicine, which, to say the least of it, has effected a cure that all other medicines that I have taken have entirely failed to do. "Hoofland's German Bitters," have cured me of the most stubborn and aggravated case of the PILES that, perhaps, ever fell to the lot of man. My case is not a stranger to this community, as I am well known in this and the surrounding counties, and can truly say that my recovery has astonished all my frinds and relations, as I had tried everything recommended, and nothing did me any good until I was prevailed upon to try the bitters. You are at liberty to make any use of this communication, for the benefit of the afflicted, as you may think proper.

Truly yours,
WM. T. ATWOOD.

These Bitters are entirely vegetable, possessing great advantage over every mineral preparation, as they never prostrate, but always strengthen the system.

Price 75c. per bottle. Sold by Druggists and Storekeepers in every town and village in the United States and Canadas, and by

WILLIAMS & HAYWOOD,
November 1856. Raleigh.

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WARRENTON, N. C.

THE 30th session of this school will commence on the 3d of January next, prepared to give thorough instructruction in all the branches of female education. Pupils received at any time. All charges from time of entrance.

Terms per Session:

Board, washing, lights and fuel in rooms,	$60 00
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December, 1855.

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☞ GARDEN-SEEDS.—To be had at the North Carolina Bookstore, Garden-Seeds, warranted fresh and good, crop of 1855, selected from the most approved Seedsmen and Gardeners in the Northern Country.

February, 1856. tf

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The subscriber is general agent for the sale of Agricultural Implements and Farming utensils, Field seeds, Fertilizers, &c. &c. Almost all the articles brought to the late Fair are kept on sale and are offered at manufacturers prices with no cost of transportatinn, as they were brought free by the Railroad.

There is also a new fire proof Ware House on the lot, in which all articles on consignment are stored. The following are some of the articles brought to the late Fair: Horse Powers, Wheat Fans, Corn Drills, Field Rollers, Corn and Cob Crushers, Harrows, Cultivators, and Plows of every size and description.

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WILLIAM H. OLIVER, & CO.,

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Grain Fans from 15 to 34 dollars a piece, among which may be found the best Fans in use. Wheat Thrashers and Horse Powers complete, capable of threshing 300 bushels wheat per day. Cultivator's, Harrows, Horse Rakes, Horse Hoes, Improved Scythes and Cradles. Plough Castings of every variety; farmers Boilers and Cauldrons; Sausage Meat Cutters and Stuffers; Pure Peruvian and Mexican Guano; Chappells Fertilizer; Ground Plaster; Bone Dust; Prepared Guano, Poudrette, &c. &c..

Hoe & Co.'s Warranted Circular and other Saws; Patent Leather Banding; Best Bolting Cloth; Mill Machinery; Mill Stones; Water Wheels; Premium Georgia Cotton Gins, and Gin Gearing, &c., &c., &c., all of which will be furnished on the most liberal terms by WILLIAM H. OLIVER & CO.

Newbern, January 1, 1856.

Strict attention given to the sale of all kinds of country produce.

FARMING IMPLEMENTS.

Little Giant Corn and Cob Mills, Nimble Giant, and various kinds and sizes, Burr Stone Grain Mills, Hay and Stalk Cutters, various sizes and kinds; Plows of all kinds—Wrought Iron Plows, and Plows with wrought points; Field and Garden Seeds; Guano, Bone Dust, Super Phosphate of Lime, &c. Allens Improved Mower and Mower and Reaper, the best in America; also several other kinds, with a complete assortment of the most approved Farming and Horticultural Implements, of good quality and at low prices.

For sale by R. L. ALLEN,
Jan. 1856 189 and 191 Water Street, N. Y.

FALL TRADE, 1856.

JOHN N. GORDON, GROCER AND COMMISSION MERCHANT, AND DEALER IN METALS, 14th Street, near the Exchange Hotel, offers for sale—

Orleans and Coffee Sugars, various grades,
Loaf, Crushed, Granulated and Powdered Sugars.
Laguira, Rio and Old Government Java Coffee.
Orleans and West India Molasses.
Pure Cider Vinegar.
Sperm, Adamantine and Tallow Candles.
Soaps, Fancy and Brown
Sole Leather, good and damaged.
All sizes Flat, Round, Square Swedes, American Hammered, English Refined, English and American rolled, } IRON.
English and American blistered Steel.
German, Cast and Shear Steel.
Broad Plough Iron, 6 to 12 inch.
American, English and Russia Sheet Iron.
Oval, half Oval and half round Iron.
Nail Rods, American and Swedes.
Band, Scroll and Hoop Iron.
Horse Shoes, assorted.
Horse and Mule Shoe Iron.
Tin Plate, Pig and Bar Tin.
Sheet Zinc, Spelter, and Spelter Solder.
Sheathing, Brazier's and Bolt Copper.
McCormick's and Palmer Mould Boards.

☞ Particular attention given to the sale of Wheat, Flour and Country Produce generally.

Richmond, Sept. 17, 1856.

THE

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ONE THOUSAND DOLLAR CASH PRIZES.

THE Twelfth Annual Volume of this useful publication commences on the 13th day of September next.

The "*Scientific American*" is an illustrated periodical, devoted chiefly to the promulgation of information relating to the various Mechanic and Chemic Arts, Industrial Manufactures, Agriculture, Patents, Inventions, Engineering, Millwork, and all interests which the light of Practical Science is calculated to advance.

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$1000—*In Cash Prizes.*—will be paid on the 1st of January next, for the largest list of subscribers, as follows:—$200 for the 1st, $175 for the 2nd, $150 for the 3d, $125 for the 4th, $100 for the 5th, $75 for the 6th, $50 for the 7th, $40 for the 8th, $30 for the 9th, $25 for the 10th, $20 for the 11th and $10 for the 12th. For all Clubs of 20 and upwards, the subscription price is only $1 40. Names can be sent from any Post Office until January 1st, 1857. ☞ Here are fine chances to secure cash prizes.

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☞ Messrs. MUNN & Co., are extensively engaged in procuring patents for new inventions, and will advise inventors, without charge, in regard to the novelty of their improvements.

Wyche's Cultivating Plow.

PATENTED 26TH FEBRUARY, 1856. (THE Bladed Plow,) awarded $20 premium at the last N. C. State Fair; with cutting blades in the place of a moldboard; cuts, divides and turns over the soil; depositing the finer parts in the furrow, and turning over the turf, clods, &c., on the surface. Is cheap, light, and lasting, and easy to both driver and team. Admirably adapted to almost any purpose for which the plow is used.

For license to sell, with further information, address

W. E. WYCHE.
Brookville, Granville Co. N. C.

June 16, 1856. 5—tf.

J. H. Gooch, Oxford, N. C., solicits orders for the above plows.

WE HAVE IN PRESS, and shall publish August 16, the Confidential Correspondence of the Emperor Napoleon, and the Empress Josephine including letters from the time of their marriage, until the death of Josephine; and also, several private letters from the Emperor to his brother Joseph, and other important personages. With numerous illustrative notes and anecdotes. By JOHN S. C. ABBOTT, author of "Life of Napoleon," &c., &c. One vol, 12mo. Price, $1.25.

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"Learn of the Mole to plough."—*Pope.*

WYCHE'S CULTIVATING PLOW, (PATENTED 8th of January, 1856)—called the Mole; Plow; with vertical cutters near the edge of a horizontal share, for dividing the furrow slice, and a curved cutter on the rear of the share for turning the whole in towards the plow, or as far on the opposite side of the share as may be desired. Adapted to siding, listing, breaking turfy or hard land, subsoiling, and many other purposes. Is light, cheap, and strong; and supposed to be the most perfect pulverizer in use.

For license to sell, with directions for manufacturing, address.

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June 16, 1856. 5—tt.

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PATENT SWINGLETREE.

THE Subscribers having purchased the sole right to make and sell these Swingletrees, in the counties of Wake, Johnston, Chatham, Orange, Franklin, Warren and Nash, would respectfully inform the public that they will attend the Courts in the above counties with them, and will also peddle them through the country.

By this Swingletree, a horse, or two or more horses can be detached from a vehicle when at full speed, with perfect safety to the vehicle and those in it. It is simple and easy, so that any boy ten years old can avail himself of its use. No such protection has ever before been invented against the dangers incident to run-away or fractious horses. Every riding vehicle ought to have one attached toit. It is a cheap safe, and certain protection against danger. It can be attached to old or new vehicles.

☞ Notice is hereby given, that any infringement on this Patent, or any immitation, or attempt to make or use by any modification, this Patent Swingletree in any of the counties above enumerated, the person or persons so offending will be prosecuted to the full extent of the law, in the U. S, Courts at Washington.

P. P. WILLIAMS & CO.

Raleigh, Feb. 14, 1856.

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THE CASH SYSTEM ADOPTED! PRICES GREATLY REDUCED.

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AGENT FOR THE BEST BOSTON AND NEW YORK INSTRUMENTS

THE LARGEST ASSORTMENT OF PIANOS, Melodeons, Musical Instruments, and Musical Merchandise of all kinds, in the United States. Pianos from TEN different Manufactories, comprising those of every variety of style, from the plain, neat and substantial 6½ octaves, in Walnut or Rosewood Cases, from $150 to $200, to those of the most elegant finish up to ONE THOUSAND DOLLARS. No house in the Union can compete with the above in the number, variety, and celebrity of its instruments, nor in the EXTREMELY LOW PRICES at which they are sold.

Horace Waters' Modern Improved Pianos,

With or without Iron Frames, possessing in their improvements of over-strings and action, a length of scale, power, and compas of tone equal to the Grand Piano, united with the beauty and durability of structure of the square Piano. They are justly pronounced by the Press and by the first Musical Masters to be equal to those of any other manufacturer. They are built of the best and most thoroughly seasoned material, and guaranteed to stand the action of every climate.

Each Instrument guaranteed to give satisfaction, or purchase-money refunded. SECOND-HAND PIANOS AT GREAT BARGAINS, constantly in store, price from $30 to $140.

HORACE WATERS' MELODEONS, superior Instruments in tone, touch and durability of make. (Tuned the equal temperament.) Melodeons of all other styles and makes. Price, $45, $60, $75, $100, $125, $140; double Reeds, $150; double Reeds and two banks of Keys, $200. Less a liberal discount. Clergymen and Churches, an extra discount.

MARTIN'S GUITARS, *Brown's Harps, Flutes, Flutinas, Accordeons, Violins*, and Musical Instruments of all kinds, at lower prices than ever before offered to the public. A large discount to Teachers and Schools. The trade supplied on the most liberal terms.

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HORACE WATERS, ESQ., 333 Broadway, New York:

Dear Sir,—Having examined your Piano-Fortes from scientific and appropriate tests, I am enabled to form a satisfactory judgement of their merits, and it is with pleasure that I can speak of them as among the most celebrated and improved makes of the day.

For Power, brilliancy and richness of tone, elasticity of touch, and beauty of finish, they will not suffer in comparison with those of any other manufacturer, and those desirous of obtaining a really good Piano-Forte—one that will prove an equivalent for their means, will find such a one in your beautiful instruments.

THOMAS BAKER,
R. A. M. Leader of Jullien's Band, and Musical Director and Conductor at Niblo's Garden.

PIANOS AND MUSIC.—We learn that Horace Waters, at 333 Broadway, N. Y., agent for the sale of many of the most celebrated makers of Pianos and Melodeons, is offering them at prices which we advise all who desire to purchase to avail themselves of. He is also selling his large and well known Catalogue of Music at one-third off from the regular prices, and will forward the same free of postage. His offers to the trade, teachers, and schools, are of the most favorable character—all of which he will be able to fill to the letter, for having wisely adopted the cash system. The Horace Waters' Pianos are known as among the very best. We are enabled to speak of those instruments with some degree of confidence, from personal knowlege of their excellent tone and durable quality.—*N. Y. Evangelist.*

The treble is clear, pure, powerful, and very melodious, the base is deep, rolling, and sonorous; the middle part is rich, and sympathetic, and possesses the power of singing, *i. e.* of uniting the sound of each tone, in a degree but rarely achieved.

Henry C. Watson.

September, 1856. 7—tf.

COOKE'S NEW MAP OF NORTH CAROLINA.

SIZE, SIX FEET BY FOUR.

THIS Large and Beautiful MAP of North Carolina is now in the hands of the Engraver, and will be ready for delivery in a few months. Persons wishing an early copy of the work, should send in their names without delay to "W. D. Cooke, Raleigh, N. C." *No Maps will be sold except by subscription.* The price will be *Eight Dollars*, payable invariably upon the delivery of the Map. The author of this Map has been engaged for about four years in its construction, and has had access to Surveys, Documents and other data accessible to no other compiler of a Map of this State; and it is believed to be one of the most *minute*, as well as *accurate* Maps that has ever been published of any State in the Union. We subjoin two recommendation from Governors Bragg and Graham, who have examined the manuscript.

Executive Office,
Raleigh, Jan. 26, 1856.

Mr. William D. Cooke has for some time been engaged in the preparation of a Map of North Carolina, which he is about to publish.

In preparing the Map, Mr C., by authority of the last General Assembly, had free access to all the Maps, Surveys and Documents in the different departments of the State Government. I am satisfied too, that he has very carefully and industriously collected all information that would aid him in his work from other sources, both public and private.

He has lately exhibited to me his Map, which I have examined, and it gives me pleasure to say that he has, in my opinion, executed his work well, and that it is by far the most accurate Map of the State that has ever been published.

THOMAS BRAGG.

Dear Sir:—I have examined, with as much care, as my limited opportunity would allow, your Map, of the State of North-Carolina, and am gratified, in expressing my conviction, that, as to the sections, with which, I am best acquainted, it is almost minutely correct: and that from the opportunities enjoyed, and pains taken by you, to acquire information, there is no reason, to doubt, its general accuracy.

This, with the attention bestowed, in delineating new Counties, Towns, Works of Public Improvement, and places famous in History and Tradition, render it, in my opinion, of much greater value, than any work of the kind, that has yet appeared.

Very Respectfully,
WILL: A. GRAHAM.

January 26th, 1856.
Wm. D. Cooke, Esq.

TO AGENTS.

AGENTS are wanted for every County in the State. None need apply who will not agree to canvass the territory they undertake *thoroughly*.

☞ All applications for agencies or letters of any kind in regard to the Map must be addressed to
WILLIAM D. COOKE, Raleigh, N. C.,

Raleigh, March 29, 1856.

Report of Professors Emmons and Mitchell, to the North Carolina State Ag. Soc., on

COOKE'S NEW MAP OF NORTH CAROLINA.

I have had frequent opportunities of testing the correctness of Mr Cooke's new Map of North Carolina, and parts of the adjoining States. This Map is worthy of special notice: 1st, from the fact that it embraces those parts of Virginia, South Carolina and Tennessee which are of immediate interest to the citizens of this State. 2d, that the eastern part of the State is compiled from data obtained through the determinations of the Coast Survey. 3d, it contains an entirely new feature in its *profile* extending along the line of the Railroad survey from Goldsboro' to Asheville, which exhibits the heights of many interesting points, as well through the central and western parts of the State lying east of the mountains as amongst the Mountains themselves.

In addition to the foregoing it may be justly said that Mr. Cooke has taken unwearied pains to correct the geography of the different counties, and to insert the prevalent names of places, those for instance which have come into use since new lines of travel have been established. It is in fact a New Map, and the only map which can be relied upon for accuracy in its details. It moreover merits commendation for the artistical skill displayed in its execution, its typography being beautiful and distinct.

EBENEZER EMMONS, State Geologist.

In the encomium passed by Prof. Emmons, upon Mr. Cooke's new Map, I fully concur. The particulars mentioned by him are of first rate importance and interest. Most of the maps of the State, heretofore published, have furnished few, if any, indications of the position of any point within our own limits, with regard to the States, north, south, or west of us. This evil has now a remedy. In noticing the map, the very efficient and important aid, in its construction, so fully afforded by Prof. A. D. Bache, Superintendent of the United States Coast Survey, and by Col. Gwynn, having the management of the Survey of a railroad, carried over the Blue Ridge into the valley of the French Broad, should not be passed in silence Only the portion of the map representing the eastern part of the State has been submitted to my inspection, but to this I presume, the rest will be made to correspond.

E. MITCHELL.

University of N. C., October 21, 1856.